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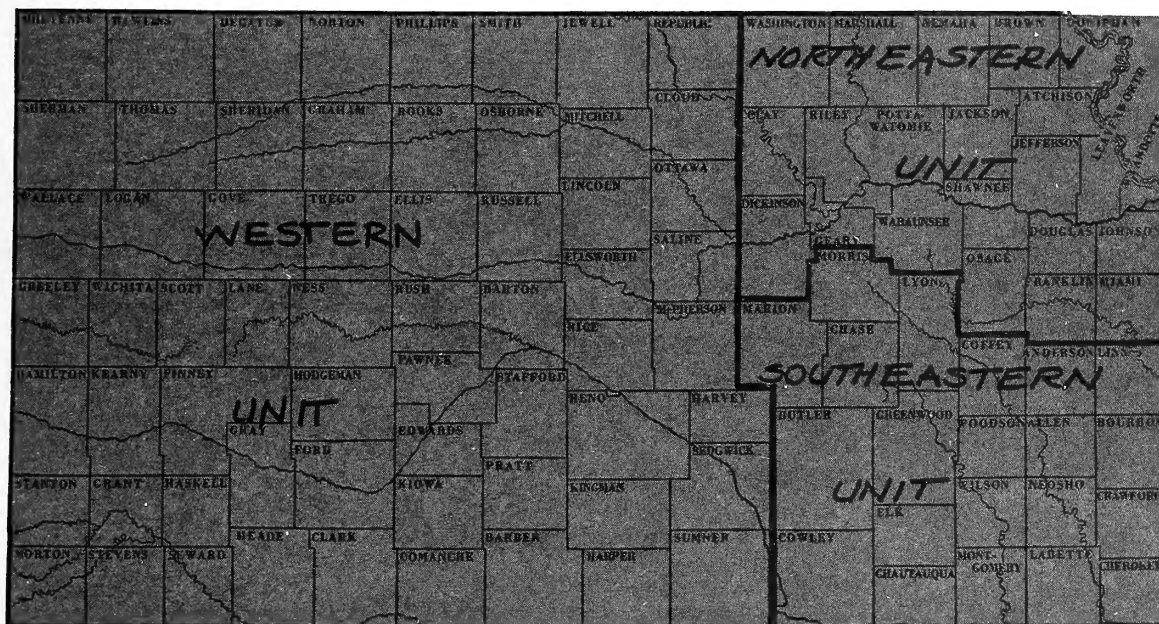
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# Kansas Forest Statistics, 1981

Gerhard K. Raile and John S. Spencer, Jr.

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Information contained in this report includes the most commonly used Forest Inventory and Analysis (FIA) statistics. However, additional forest resource data can be provided to interested users. Persons requesting additional information that can be provided from the raw inventory data are expected to pay for the retrieval costs. These costs will vary depending on the complexity of the request, from less than \$100 for a relatively simple request to \$2,000 for a complete retrieval involving the services of a FIA computer programmer. If requests for data conflict with ongoing work, requests will be scheduled so as to minimize the impact on the work unit.

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# KANSAS FOREST STATISTICS, 1981

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## HIGHLIGHTS

### Area

- Forest land area totaled 1.4 million acres—2.6 percent of the State's total land area.
- Productive-reserved forest land increased from 900 acres in 1965 to 22,400 acres in 1981.
- Nine percent of the State's forest land is unproductive forest.
- Commercial forest land increased by 1.4 percent between 1965 and 1981, from 1,191,500 to 1,207,900 acres.
- Commercial forest land is concentrated in the Northeastern (588,100 acres) and the Southeastern (437,000 acres) Survey Units.
- Nonindustrial private parties own 96 percent of the State's commercial forest land—farmers alone own 62 percent.
- The elm-ash-cottonwood (289,600 acres), oak-hickory (316,600) and lowland plains hardwoods (265,900) forest types account for 72 percent of the commercial area.
- Sawtimber stands account for 47 percent of the commercial forest, followed by sapling and seedling stands (30 percent), poletimber stands (19 percent), and nonstocked areas (4 percent).
- Stands up to 20 years of age occupy 29 percent of the commercial forest.
- Forty-three percent of the commercial forest is poorly stocked with growing-stock trees (16.7 to 60 percent stocked), 45 percent is medium stocked (61 to 100 percent stocked), and 8 percent is well stocked (101 to 133 percent stocked).

- Windbreaks occupy 186,300 acres.
- Wooded strips amount to 150,000 acres and are part of the 1.2 million acres of nonforest land with trees in the State. Wooded strips do not include windbreaks and would be commercial forest except for width.

### Volume

- The total volume of timber in 1981 was 927.0 million cubic feet—711.3 million in growing-stock trees, 211.3 million in rough and rotten trees, and 4.4 million in salvable dead trees.
- Growing-stock volume in 1981 (711.3 million cubic feet) increased 42 percent from the 502.6 million cubic feet in 1965.
- Growing-stock volume per acre increased 40 percent from 422 cubic feet in 1965 to 589 cubic feet in 1981.
- Sawtimber volume on commercial forest land increased 31 percent from 1,953.5 million board feet in 1965 to 2,566.2 million board feet in 1981.
- Sawtimber volume per acre of commercial forest land increased 30 percent from 1,640 board feet in 1965 to 2,125 board feet in 1981.
- In addition to the sawtimber volume on commercial forest land, there were 147.9 million board feet in short-log trees, and 315.5 million board feet in sawtimber and short-log trees on wooded strips.
- Cottonwood accounts for the largest volume of growing stock on commercial forest land (19 percent), followed by hackberry (12 percent), ash (9 percent), bur oak (9 percent), and black walnut (8 percent).

- While nearly all species increased in volume between the two surveys, elm growing stock took a drastic drop due to Dutch elm disease—from 89.2 million cubic feet in 1965 to 30.6 million cubic feet in 1981. The drop in elm board foot volume was even more significant—from 358.3 million board feet in 1965 to 69.5 million board feet in 1981.
- Farmers own 427.2 million cubic feet of growing stock (60 percent of the total), and miscellaneous private parties own 243.2 million cubic feet (34 percent of the total).
- The lowland plains hardwoods type accounts for 25 percent of the growing-stock volume, the oak-hickory type for 27 percent, and the elm-ash-cottonwood type for 24 percent.

## Stand Conditions

- Net annual growth of growing stock amounted to 23.2 million cubic feet in 1980 (3.3 percent of inventory) compared to 22.1 million in 1964 (4.4 percent of inventory).
- Sawtimber growth was 64.0 million board feet in 1980, 2.5 percent of inventory.
- Mortality of growing-stock trees totaled 3.8 million cubic feet in 1980—0.5 percent of inventory.
- Disease accounts for 40 percent of the mortality volume—more than any other known cause.
- Sawtimber volume by butt log grade is fairly evenly divided between the best 3 grades of the 4 log grades used.

## Timber Use

- Timber removals from growing stock totaled 14.0 million cubic feet in 1980—12.1 million for roundwood products, 1.1 million for other removals, and 0.8 million for logging residue.

- Removals of growing stock in 1980 are 68 percent higher than those in 1964.
- Farmers and miscellaneous private individuals owned 99.9 percent of the 1980 growing-stock removals.
- Sawtimber removals from commercial forest land totaled 53.3 million board feet in 1980—77 percent higher than in 1964.
- Timber products output totaled 25.0 million cubic feet in 1980—76 percent as fuelwood and 20 percent as saw logs.
- Output of saw logs, veneer logs and cooperage from all sources totaled 32.7 million board feet in 1980—a 50 percent increase over 1964.
- Wood residue from primary plants amounted to 2.7 million cubic feet in 1980—one fourth of it was not used.

## Biomass

- Live tree biomass (trees greater than 1-inch in d.b.h.) totaled 53.3 million green tons (an average of 44 tons per acre) in 1981.
- Fifty-six percent of the live tree biomass is in the boles of trees greater than 5-inches d.b.h., 30 percent is in tops and limbs of trees greater than 5-inches d.b.h., and 14 percent is in trees less than 5-inches d.b.h.
- Highest yields per acre of live tree biomass (green weight) are in the cottonwood type (77 tons), the lowland plains hardwoods type (48 tons), the oak-hickory type (47 tons), and the post-blackjack oak type (46 tons)



# APPENDIX

## ACCURACY OF SURVEY

Forest Inventory and Analysis information is based on a sampling procedure designed to provide reliable statistics at the State and Survey Unit levels. Consequently, the reported figures are estimates only. However, a measure of reliability of these figures is given by sampling errors. These sampling errors mean that the chances are two out of three that if a 100-percent inventory had been taken, using the same methods, the results would have been within the limits indicated.

For example, the estimated area of commercial forest land in Kansas in 1981, 1,207,900 acres, has a sampling error of  $\pm 2.45$  percent ( $\pm 29,600$  acres). The commercial forest area from a 100-percent inventory, then, would be expected to fall between 1,237,500 and 1,178,300 acres ( $1,207,900 \pm 29,600$ ), there being a one in three chance that this is not the case.

The following tabulation shows sampling errors for State totals of information collected during the 1981 Kansas Forest Inventory:

| Item                   | Kansas totals        | Sampling error |
|------------------------|----------------------|----------------|
| Growing stock          | (Million cubic feet) | (Percent)      |
| Volume                 | 711.3                | 3.52           |
| Growth                 | 26.2                 | 5.61           |
| Removals               | 14.0                 | 17.00          |
| Sawtimber              | (Million board feet) |                |
| Volume                 | 2,566.2              | 4.24           |
| Growth                 | 80.8                 | 6.44           |
| Removals               | 53.2                 | 20.10          |
| Commercial forest land | (Thousand acres)     |                |
| Area                   | 1,207.9              | 2.45           |

As survey data are broken down into sections smaller than State or Survey Unit totals, the sampling error increases. The smaller the breakdown, the larger the sampling error. For example, the sampling error for area of commercial forest land in a particular county is higher than that for total commercial forest area in the Survey Unit (table 102 shows the sampling errors for estimates smaller than State totals).

## SURVEY PROCEDURE

The major steps in the survey of Kansas were as follows:

1. A total of 275,271 1-acre points were systematically distributed across aerial photos of the entire State. Photo interpreters classified these points as forest land (9,570), nonforest land with trees (5,208), nonforest land without trees (258,420), questionable (424), and water (1,649) to make a preliminary estimate of forest area. Next, all of the forest points (9,570), 543 of the nonforest with tree points, and all of the questionable points (424) were stereoclassified as to forest type, stand-size class, and density. Then, 1,386 points classed as forest, 96 points classed as questionable, and 543 points classed as nonforest with trees were examined on the ground to correct the preliminary area estimate for errors in classification and for actual changes in land use since the photos were taken. At each of 937 locations classed as commercial forest, variable-radius plots (basal area factor 37.5) were established at 10 points uniformly placed over the sample acre. Two hundred twenty-two of these 937 locations were plots established during the 1965 survey and remeasured during the 1981 survey to provide improved growth and mortality information. Tree measurements made at commercial forest locations were the basis for estimates of timber volume, growth, mortality, number of trees, and other forest classifications.

2. An estimate of the volume of black walnut on nonforest land was made by establishing 10-point, variable-radius plots on nonforest ground check locations wherever black walnut trees were found. This included black walnut trees found on fence rows or as scattered trees but did not include walnut trees in urban areas, lawns, or in other areas where they would probably not be harvested.

3. An estimate of the volume of timber on nonforest wooded strips was made by establishing 10-point fixed-radius plots on wooded strip ground check locations. The design and size of these plots were adjusted to allow for the narrowness of the strips.

4. Growth and mortality on commercial forest land were estimated using data collected on both remeasurement plots (those established in 1965 and remeasured in 1981) and new plots established in 1981. On remeasurement plots growth was calculated as the observed change in volume on surviving trees. On new plots growth was estimated by using growth equations developed during the 1972 Missouri survey. Mortality on remeasurement plots was calculated as the observed volume in trees that died between surveys. And mortality on new plots was

estimated by determining the volume in trees that died within 3 years of plot establishment. Growth and mortality were converted to an annual basis.

5. Statistics on timber utilization during 1980 were obtained from mill surveys. State and Extension Forestry, Kansas State University canvassed resident sawmills and other primary wood-using plants. The North Central Forest Experiment Station canvassed out-of-State primary wood-using mills such as sawmills and veneer mills to determine their use of Kansas timber. State and Extension Forestry estimated 1980 fuelwood and post production from roundwood based on the best information available on recent output of these products. Estimates of primary mill residue used for fuelwood were obtained from the canvass of Kansas primary wood-using plants. Timber cut for products by ownership class was determined by a canvass of public and industrial timber owners. The portion of timber harvest unaccounted for by the latter owners was grouped under "farmer and other owners".

6. Wood utilization factors for converting timber products output to timber removals for saw logs, veneer logs, and cooperage logs were obtained during the 1971-1972 Missouri utilization study. Factors for fuelwood were obtained during the 1964 Kansas utilization study. Factors for all other products were obtained during the 1959-1960 Missouri utilization study.

7. Field data were sent to St. Paul, Minnesota, for processing and analysis.

## **COMPARING KANSAS' THIRD SURVEY WITH THE SECOND SURVEY**

Data from new forest surveys are often compared with data from earlier ones to determine trends in forest areas and volumes. Changes in procedures and

definitions between surveys make it necessary to adjust earlier survey data so they are comparable to data from the new survey.

We adjusted the published 1965 area of commercial forest land, 1,192,400 acres, by subtracting 900 acres that were classed commercial forest in 1965 but were Christmas tree production areas (productive-reserved forest land) in 1981. The adjusted 1965 area (1,191,500 acres) can be compared directly with the 1981 area (1,207,900 acres).

A test was made to ensure that it was possible to move from the adjusted 1965 volumes to the new 1981 volumes by means of Timber Resource Analysis System (TRAS), a Forest Service computer program for updating, backdating, and projecting timber volume, growth, mortality, and removals. TRAS then recalculated 1965 volumes using 1981 estimates of cubic foot volume per tree and 1981 board foot-cubic foot ratios. This volume adjustment was necessary so that volume differences between surveys represented actual change and not merely change in the volume equations used on each occasion.

## **LOG GRADE**

In Kansas the butt log of every sawtimber tree was graded for quality on every full permanent sample plot, remeasurement plot, and nonforest plot with black walnut trees (4,194 trees). Logs were graded on the basis of external characteristics. Hardwood species were graded according to "Hardwood Log Grades for Standard Lumber".<sup>1</sup> The best 12-foot section of the lowest 16-foot hardwood log, or the best 12-foot upper section if the butt log did not meet minimum log-grade standards, was graded as follows:

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<sup>1</sup>Vaughn, C. L.; Wollin, C. A.; McDonald, K. A.; Bulgrin, E. H. *Hardwood log grades for standard lumber. Res. Pap. FPL 63, Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory; 1966. 52 p.*

# Forest Service standard grades for hardwood factory saw logs

| Grading factors   |  | Specifications          |                  |               |                   |                         |               |               |                  |
|---|--|-------------------------|------------------|---------------|-------------------|-------------------------|---------------|---------------|------------------|
|   |  | Log grade 1             |                  |               |                   | Log grade 2             |               |               | Log grade 3      |
| Position in tree  |  | Butts only              | Butts and uppers |               |                   | Butts and uppers        |               |               | Butts and uppers |
| Scaling diameter, inches  |  | <sup>1</sup> 13-15      | 16-19            | 20 +          | <sup>2</sup> 11 + | 12 +                    |               |               | 8 +              |
| Length without trim, feet   |  |                         | 10 +             |               | 10 +              | 8-9                     | 10-11         | 12 +          | 8 +              |
| Required clear cuttings <sup>3</sup> of each of three best faces <sup>4</sup> | Min. length, feet  | 7                       | 5                | 3             | 3                 | 3                       | 3             | 3             | 2                |
|   | Max. number  | 2                       | 2                | 2             | 2                 | 2                       | 2             | 3             | No Limit         |
|   | Min. proportion of log length required in clear cutting    | $\frac{5}{6}$           | $\frac{5}{6}$    | $\frac{5}{6}$ | $\frac{2}{3}$     | $\frac{3}{4}$           | $\frac{2}{3}$ | $\frac{2}{3}$ | $\frac{1}{2}$    |
| Maximum sweep and crook allowance   | For logs with less than one-fourth of end in sound defects | 15 percent              |                  |               |                   | 30 percent              |               |               | 50 percent       |
|   | For logs with more than one-fourth of end in sound defects | 10 percent              |                  |               |                   | 20 percent              |               |               | 35 percent       |
| Maximum scaling deduction   |  | 40 percent <sup>5</sup> |                  |               |                   | 50 percent <sup>6</sup> |               |               | 50 percent       |

<sup>1</sup>Ash and basswood butts can be 12 inches if they otherwise meet requirements for small #1's.

<sup>2</sup>Ten-inch logs of all species can be #2's if they otherwise meet requirements for small #1's.

<sup>3</sup>A clear cutting is a portion of a face, extending the width of the face, that is free of defects.

<sup>4</sup>A face is one-fourth of the surface of the log as divided lengthwise.

<sup>5</sup>Otherwise #1 logs with 41-60 percent deductions can be #2.

<sup>6</sup>Otherwise #2 logs with 51-60 percent deductions can be #3.

## Forest Service standard specifications for hardwood construction logs (tie and timber logs)

|                           |               |  |
|---------------------------|---------------|--|
| Position in tree          |               | Butt and upper   |
| Min. diameter, small end  |               | 8 inches +   |
| Min. length, without trim |               | 8 feet   |
| Clear cuttings            |               | No requirements.   |
| Sweep allowance, absolute |               | One-fourth of the diameter at the small end for each 8 feet of length.   |
| Sound surface defects     | Single knots  | Any number, if no one knot has an average diameter above the callus in excess of one-third of the log diameter at point of occurrence.   |
|                           | Whorled knots | Any number if sum of knot diameters above the callus does not exceed one-third of the log diameter at point of occurrence.   |
|                           | Holes         | Any number provided none has a diameter over one-third of the log diameter at point of occurrence, and none extends more than 3 inches into included timber. <sup>2</sup>  |
| Unsound surface defects   |               | Same requirements as for sound defects if they extend into included timber. <sup>2</sup> No limit if they do not.  |
| End defects               | Sound         | No requirements.   |
|                           | Unsound       | None allowed; log must be sound internally, but will admit one shake not to exceed one-fourth the scaling diameter and will admit a longitudinal split not extending more than 5 inches into the contained timber. |

<sup>1</sup>These specifications are minimum for the class. If, from a group of logs, factory logs are selected first, thus leaving only non-factory logs from which to select construction logs, then the quality range of the construction logs so selected is limited, and the class may be considered a grade. If selection of construction logs is given first priority, then it may be necessary to subdivide the class into grades.

<sup>2</sup>Included timber is always square, and dimension is judged from small end.

Softwood species were graded according to the following specifications:

## Log Grades for Softwood Logs

### Grade 1

1. Logs must be 16 inches or larger, 10 feet or longer, and with deduction for defect not over 30 percent of gross scale.
2. Logs must be at least 75 percent clear on each of three faces.
3. All knots outside clear cutting must be sound and not over 2-1/2 inches in diameter.

### Grade 2

1. Logs must be 12 inches or larger, 10 feet or longer, and with a net scale after deduction for defect of at least 50 percent of the gross contents of the log.
2. Logs must be at least 50 percent clear on each of three faces or 75 percent clear on two faces.

### Grade 3

1. Logs must be 6 inches or larger, 8 feet or longer, and with a net scale after deduction for defect of at least 50 percent of the gross contents of the log.

Note: (A) Diameters are diameter inside bark at small end of log.

(B) Percent clear refers to percent clear in one continuous section.

## PRINCIPAL TREE SPECIES GROUPS IN KANSAS<sup>2</sup>

### Softwoods

Eastern redcedar . . . . . *Juniperus virginiana*

### Hardwoods

Bur oak . . . . . *Quercus macrocarpa*

#### Select white oak

White oak . . . . . *Quercus alba*

Chinkapin oak . . . . . *Quercus muehlenbergii*

#### Other white oak

Post oak . . . . . *Quercus stellata*

### Select red oak

Northern red oak . . . . . *Quercus rubra*

Shumard oak . . . . . *Quercus shumardii*

### Other red oak

Black oak . . . . . *Quercus velutina*

Blackjack oak . . . . . *Quercus marilandica*

Pin oak . . . . . *Quercus palustris*

Shingle oak . . . . . *Quercus imbricaria*

### Hickory

Shellbark hickory . . . . . *Carya laciniosa*

Mockernut hickory . . . . . *Carya tomentosa*

Shagbark hickory . . . . . *Carya ovata*

Bitternut hickory . . . . . *Carya cordiformis*

Black hickory . . . . . *Carya texana*

Pecan . . . . . *Carya illinoensis*

### Hard maple

Sugar maple . . . . . *Acer saccharum*

### Soft maple

Silver maple . . . . . *Acer saccharinum*

### Ash

Green ash . . . . . *Fraxinus pennsylvanica*

White ash . . . . . *Fraxinus americana*

### Cottonwood

Eastern cottonwood . . . . . *Populus deltoides*

### Basswood

American basswood . . . . . *Tilia americana*

### Elm

American elm . . . . . *Ulmus americana*

Siberian elm . . . . . *Ulmus pumila*

Slippery elm . . . . . *Ulmus rubra*

Black walnut . . . . . *Juglans nigra*

### Willow

Black willow . . . . . *Salix nigra*

Boxelder . . . . . *Acer negundo*

Hackberry . . . . . *Celtis occidentalis*

### Sycamore

American sycamore . . . . . *Platanus occidentalis*

### Other hardwood

Black cherry . . . . . *Prunus serotina*

Black locust . . . . . *Robinia pseudoacacia*

Honeylocust . . . . . *Gleditsia triacanthos*

Kentucky coffeetree . . . . . *Gymnocladus dioica*

Northern catalpa . . . . . *Catalpa speciosa*

Common persimmon . . . . . *Diospyros virginiana*

Red mulberry . . . . . *Morus rubra*

River birch . . . . . *Betula nigra*

Sugarberry . . . . . *Celtis laevigata*

Texas buckeye . . . . . *Aesculus glabra* var. *arguta*

<sup>2</sup>The common and scientific names are based on: Little, Elbert L., Jr. Checklist of United States Trees (Native and Naturalized). Agric. Handb. 541. Washington, DC: U.S. Department of Agriculture, Forest Service; 1979. 375 p.

# METRIC EQUIVALENTS OF UNITS USED IN THIS REPORT

1 acre = 4,046.86 square meters or 0.405 hectare.  
1,000 acres = 405 hectares.  
1,000 board feet (International 1/4-inch log rule) =  
3.48 cubic meters.  
Breast height = 1.4 meters above the ground.  
1 cubic foot = 0.0283 cubic meter.  
1 foot = 30.48 centimeters or 0.3048 meter.  
1 inch = 25.4 millimeters, 2.54 centimeters, or 0.0254  
meter.

## DEFINITION OF TERMS

**Acceptable trees.**—Growing-stock trees of commercial species that meet specified standards of size and quality but do not qualify as desirable trees.

**Area-condition classes.**—*Class 10.*—Areas fully stocked with desirable trees but not overstocked.

*Class 20.*—Areas fully stocked with desirable trees, but overstocked with all live trees.

*Class 30.*—Areas medium to fully stocked with desirable trees, and with less than 30 percent of the area controlled by other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

*Class 40.*—Areas medium to fully stocked with desirable trees and with 30 percent or more of the area controlled by other trees and/or conditions that ordinarily prevent occupancy by desirable trees.

*Class 50.*—Areas poorly stocked with desirable trees, but fully stocked with growing-stock trees.

*Class 60.*—Areas poorly stocked with desirable trees, but with medium to full stocking of growing-stock trees.

*Class 70.*—Areas poorly stocked with desirable trees and poorly stocked with growing-stock trees.

**Basal area.**—The area in square feet of the cross section at breast height of a single tree. When the basal area of all trees in a stand are summed, the result is usually expressed as square feet of basal area per acre.

**Biomass.**—The above-ground volume of all live trees (including bark and foliage) reported in green tons. Biomass is made up of 5 components:

*Growing-stock bole.*—Biomass of a growing-stock tree from a 1-foot stump to a variable 4-inch top.

*Growing-stock tops and limbs.*—Biomass of a growing-stock tree from a 1-foot stump minus the growing-stock bole.

*Cull bole.*—Biomass of a cull tree from a 1-foot stump to a variable 4-inch top.

*Cull tops and limbs.*—Biomass of a cull tree from a 1-inch stump minus the cull bole.

*1- to 5-inch trees.*—Biomass of all live trees 1- to 5-inches in diameter at breast height.

**Commercial forest land.**—Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization. (Note: Areas qualifying as commercial forest land have the capability of producing in excess of 20 cubic feet per acre per year of annual growth under management. Currently inaccessible and inoperable areas are included, except when the areas involved are small and unlikely to become suitable for production of industrial wood in the foreseeable future.) Also see definition of pastured commercial forest land.

**Commercial species.**—Tree species presently or prospectively suitable for industrial wood products. (Note: Excludes species of typically small size, poor form, or inferior quality such as hop-hornbeam and hawthorn.)

**County and municipal land.**—Lands owned by counties and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

**Cull.**—Portions of a tree that are unusable for industrial wood products, because of rot, form, or other defect.

**Desirable trees.**—Growing-stock trees having no serious defects in quality limiting present or prospective use, and of relatively high vigor, and containing no pathogens that may result in death or serious deterioration before rotation age. These are trees that would be favored by forest managers in silvicultural operations.

**Diameter classes.**—A classification of trees based on diameter outside bark, measured at breast height (4-1/2 feet above the ground). (Note: d.b.h. is the common abbreviation for diameter at breast height. Two-inch diameter classes are commonly used in Forest Inventory and Analysis, with the

even inch the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h. inclusive).

**Farm.**—Any place from which \$1,000 or more of agricultural products were sold or normally would have been sold during the year.

**Farmer-owned land.**—Land owned by operators of farms. (Note: Excludes land leased by farm operators from nonfarm owners, such as railroad companies and States.)

**Forest land.**—Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use. (Note: Stocking is measured by comparison of basal area and/or number of trees, by age or size and spacing with specified standards.) The minimum area for classification of forest land is 1 acre. Roadside, streamside, and shelterbelt strips of timber must have a crown width at least 120 feet to qualify as forest land. Unimproved roads and trails, streams, or other bodies of water or clearings in forest areas shall be classed as forest if less than 120 feet in width. Also see definitions of land area, commercial forest land, noncommercial forest land, productive-reserved forest land, stocking, unproductive forest land, nonforest land, and water.

**Forest industry land.**—Land owned by companies or individuals operating primary wood-using plants.

**Forest trees.**—Woody plants having a well-developed stem and usually more than 12 feet in height at maturity.

**Forest types.**—A classification of forest land based upon the species forming a plurality of live tree stocking. Major forest types in Kansas are:

*Eastern redcedar-hardwood.*—Forests in which hardwoods comprise a plurality of the stocking but in which eastern redcedar comprises 25 percent or more of the stocking. Found on dry uplands, usually abandoned pastures or fields.

*Oak-hickory.*—Forests in which upland oaks (white, northern red, black) or hickory, singly or in combination, comprise a plurality of the stocking, except for stands classed as eastern redcedar-hardwood or as post-blackjack oak. Occurs on a variety of soils.

*Post-blackjack oak.*—Forests in which post oak or blackjack oak, singly or in combination, com-

prise a majority of the stocking. Occurs on dry uplands and ridges.

*Upland plains hardwoods.*—Forests in which black walnut, hackberry, and bur oak, singly or in combination, comprise a plurality of the stocking. Commonly found on slopes and uplands.

*Elm-ash-cottonwood.*—Lowland forest in which elm, ash, cottonwood, and willow, singly or in combination, comprise a plurality of the stocking, except for those in which cottonwood or willow comprise a majority of the stocking. Found on first or second bottoms of major streams.

*Cottonwood.*—Forests in which cottonwood comprises a majority of the stocking.

*Willow.*—Forests in which willow comprises a majority of the stocking.

*Lowland plains hardwoods.*—Forests in which black walnut, hackberry, bur oak, soft maple, and boxelder, singly or in combination, comprise a plurality of the stocking. Commonly found in coves and bottomlands.

*Upland elm-ash-locust.*—Upland forests in which elm, ash, and honeylocust, singly or in combination, comprise a plurality of the stocking. Includes shelterbelts and windbreaks on sites drier than those commonly associated with lowland species.

**Gross area.**—The entire area of land and water as determined by the Bureau of the Census, 1980.

**Growing-stock trees.**—Live trees of commercial species qualifying as desirable and acceptable trees. (Note: Excludes rough, rotten, and dead trees.)

**Growing-stock volume.**—Net volume in cubic feet of growing-stock trees 5.0 inches d.b.h. and over, from a 1-foot stump to a minimum 4.0 inch top diameter outside bark of the central stem or to the point where the central stem breaks into limbs. Cubic feet can be converted to cords by dividing by 79 cubic feet per solid wood cord.

**Hardwoods.**—Dicotyledonous trees, usually broad-leaved and deciduous.

**Idle farmland.**—Includes former croplands, orchards, improved pastures, and farm sites not tended within the past 2 years and presently less than 16.7 percent stocked with trees.

**Improved pasture.**—Land currently improved for grazing by cultivating, seeding, irrigating, or clearing of trees or brush, and less than 16.7 percent stocked with live trees.



**Indian lands.**—Tribal lands held in fee but administered by the Federal Government.

**Land area.**—A. *Bureau of the Census.* The area of dry land and land temporarily or partly covered by water, such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide); streams, sloughs, estuaries, and canals less than one-eighth of a statute mile in width; and lakes, reservoirs, and ponds less than 40 acres in area.

B. *Forest Inventory and Analysis.* The same as the Bureau of the Census, except minimum width of streams, etc. is 120 feet and minimum size of lakes, etc. is 1 acre.

**Live trees.**—Growing-stock, rough, and rotten trees 1 inch d.b.h. and larger.

**Log grades.**—A classification of logs based on external characteristics as indicators of quality or value. (See Appendix for specific grading factors used.)

**Logging residues.**—The unused growing-stock portions of trees cut or killed by logging.

**Maintained road.**—Any road, hard-topped or other surfaces, that is plowed or graded at least once a year. Includes rights-of-way that are cut or treated to limit herbaceous growth.

**Marsh.**—Nonforest land that characteristically supports low, generally herbaceous or shrubby vegetation and that is intermittently covered with water.

**Merchantable.**—Refers to a pulpwood or saw log section that meets pulpwood or saw log specifications, respectively.

**Miscellaneous federal lands.**—Federal land other than National Forest, primarily land administered by the Bureau of Land Management.

**Miscellaneous private lands.**—Privately owned lands other than forest industry and farmer-owned land.

**Mortality.**—The volume of sound wood in growing-stock and sawtimber trees that die annually.

**National forest land.**—Federal lands that have been legally designated as National Forests or purchase units, and other lands under the administration of the USDA Forest Service.

**Net annual growth of growing stock.**—The annual change in volume of sound wood in live sawtimber and poletimber trees and the total volume of trees entering these classes through ingrowth, less volume losses resulting from natural causes.

**Net annual growth of sawtimber.**—The annual change in the volume of live sawtimber trees and the total volume of trees reaching sawtimber size, less volume losses resulting from natural causes.

**Net volume.**—Gross volume less deductions for rot, sweep, or other defect affecting use for timber products.

**Noncommercial forest land.**—(a) Unproductive forest land and (b) productive-reserved forest land. See definition of unproductive and productive-reserved forest land.

**Noncommercial species.**—Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

**Nonforest land.**—Land that has never supported forests, and lands formerly forested where use for timber management is precluded by development for other uses. (Note: Includes areas used for crops, improved pasture, residential areas, city parks, improved roads of any width and adjoining clearings, powerline clearings of any width, and 1- to 40-acre areas of water classified by the Bureau of the Census as land. If intermingled in forest areas, unimproved roads and nonforest strips must be more than 120 feet wide, and more than 1 acre in size, to qualify as nonforest land.)

A. *Nonforest land without trees.*—Nonforest land with no live trees present.

B. *Nonforest land with trees.*—Nonforest land with one or more trees at least 5 inches d.b.h. per acre.

**Nonstocked land.**—Commercial forest land less than 16.7 percent stocked with growing-stock trees.

**Other removals.**—Growing-stock trees removed but not utilized for products, or trees left standing but “removed” from the commercial forest land classification by land use change. Examples are removals from cultural operations such as timber stand improvement work, land clearing, and changes in land use.

**Ownership.**—Property owned by one owner, regardless of the number of parcels in a specified area.



**Ownership size class.**—The amount of commercial forest land owned by one owner, regardless of the number of parcels.

**Owner tenure.**—The length of time a property has been held by the owner.

**Pastured commercial forest land.**—Commercial forest land for which the primary use is wood production, but is presently used for grazing.

**Physiographic class.**—A measure of soil and water conditions that affect tree growth on a site. Physiographic classes used in Forest Inventory and Analysis inventories are:

*Xeric sites.*—Very dry droughty sites where excessive drainage seriously limits both growth and species occurrence. These sites are usually on upland and upper half slopes.

*Xeromesic sites.*—Moderately dry soils where excessive drainage limits growth and species occurrence to some extent. These sites are usually on the lower half slope.

*Mesic sites.*—Deep, well-drained soils. Growth and species occurrence are limited only by climate. These include all cove sites and bottomlands along intermittent streams.

*Hydromesic sites.*—Moderately wet soils where insufficient drainage or infrequent flooding limits growth and species occurrence to some extent. These include first and second bottoms on all major creeks and rivers.

*Hydric sites.*—Very wet sites where excess water seriously limits both growth and species occurrence.

**Plant byproducts.**—Plant residues used for products such as mulch, pulp chips, and fuelwood.

**Plant residues.**—Wood and bark materials generated at manufacturing plants during production of other products.

**Poletimber stands.**—(See stand-size class.)

**Poletimber trees.**—Growing-stock trees of commercial species at least 5.0 inches in d.b.h., but smaller than sawtimber size.

**Productive-reserved forest land.**—Forest land sufficiently productive to qualify as commercial forest land, but withdrawn from timber utilization through statute, administration regulation, designation, or exclusive use for Christmas tree production, as indicated by annual shearing.

**Rotten trees.**—Live trees of commercial species that do not contain at least one 12-foot saw log or two saw logs 8 feet or longer, now or prospectively, and/or do not meet Regional specifications for freedom from defect primarily because of rot; that is, when more than 50 percent of the cull volume in a tree is rotten.

**Rough trees.**—(a) Live trees of commercial species that do not contain at least one merchantable 12-foot saw log or two saw logs 8 feet or longer, now or prospectively, and/or do not meet Regional specifications for freedom from defect primarily because of roughness or poor form, and (b) all live trees of noncommercial species.

**Roundwood products.**—Logs, bolts, or other round sections (including chips from roundwood) cut from trees for industrial or consumer uses. (Note: Includes saw logs, veneer logs and bolts; cooperage logs and bolts; pulpwood; fuelwood; piling; poles; posts; hewn ties; mine timbers; and various other round, split, or hewn products.)

**Salvable dead trees.**—Standing or down dead trees that are considered merchantable by Regional standards.

**Saplings.**—Live trees 1.0 to 5.0 inches d.b.h.

**Sapling-seedling stands.**—(See stand-size class.)

**Saw log.**—A log meeting minimum standards of diameter, length and quality, including logs at least 8 feet long, sound and straight and with a minimum diameter outside bark (d.o.b.) for softwoods of 7 inches (9 inches for hardwoods) or other combinations of size and defect specified by Regional standards.

**Saw log portion.**—That part of the bole of sawtimber trees between the stump and the saw log top.

**Saw log top.**—The point on the bole of sawtimber trees above which a saw log cannot be produced. The minimum saw log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

**Sawtimber stands.**—(See stand-size class.)

**Sawtimber trees.**—Growing-stock trees of commercial species containing at least a 12-foot saw log or two noncontiguous saw logs 8 feet or longer, and meeting Regional specifications for freedom from defect. Softwoods must be at least 9.0 inches d.b.h. Hardwoods must be at least 11.0 inches d.b.h.

**Sawtimber volume.**—Net volume of the saw log portion of live sawtimber in board feet, International ¼-inch rule, from stump to a minimum 7 inches top d.o.b. for softwoods and a minimum 9 inches top d.o.b. for hardwoods.

**Seedlings.**—Live trees less than 1.0 inch in d.b.h. that are expected to survive. Only softwood seedlings more than 6 inches tall and hardwood seedlings more than 1 foot tall are counted.

**Short-log (rough tree).**—Live trees of commercial species that contain one merchantable 8- to 11-foot saw log but not a 12-foot saw log, now or prospectively.

**Shrub biomass.**—The total above-ground volume (including the bark) of selected shrubs and trees less than 1-inch d.b.h.

**Site classes.**—A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully-stocked natural stands.

**Site index.**—An expression of forest site quality based on the height of a free-growing dominant or codominant tree of a representative species in the forest type at age 50.

**Softwoods.**—Coniferous trees, usually evergreen, having needles or scale-like leaves.

**Stand.**—A growth of trees on a minimum of 1 acre of forest land that is stocked by forest trees of any size.

**Stand-age class.**—Age of the main stand. Main stand refers to trees of the dominant forest type and stand-size class.

**Stand-area class.**—The extent of a continuous forested area of the same forest type, stand-size class, and stand-density class.

**Stand-size class.**—A classification of forest land based on the size class of growing-stock trees on the area; that is, sawtimber, poletimber or seedlings and saplings.

*Sawtimber stands.*—Stands at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

*Poletimber stands.*—Stands at least 16.7 percent stocked with growing-stock trees of which

half or more of this stocking is in poletimber and/or sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

*Sapling-seedling stands.*—Stands at least 16.7 percent stocked with growing-stock trees of which more than half of the stocking is saplings and/or seedlings.

*Nonstocked stands.*—Stands in which stocking of growing-stock trees is less than 16.7 percent.

**State lands.**—Lands owned by States, or lands leased to these governmental units for 50 years or more.

**Stocking.**—The degree of occupancy of land by trees, measured by basal area and/or the number of trees in a stand by size or age and spacing, compared to the basal area and/or number of trees required to fully utilize the growth potential of the land; that is, the stocking standard.

A stocking percent of 100 indicates full utilization of the site and is equivalent to 80 square feet of basal area per acre in trees 5 inches d.b.h. and larger. In a stand of trees less than 5 inches d.b.h., a stocking percent of 100 would indicate that the present number of trees is sufficient to produce 80 square feet of basal area per acre when the trees reach 5 inches d.b.h.

Stands are grouped into the following stocking classes:

*Overstocked stands.*—Stands in which stocking of trees is 134.0 percent or more.

*Fully stocked stands.*—Stands in which stocking of trees is from 101.0 to 133.9 percent.

*Medium stocked stands.*—Stands in which stocking of trees is from 61.0 to 100.9 percent.

*Poorly stocked stands.*—Stands in which stocking of trees is from 16.7 to 60.9 percent.

*Nonstocked areas.*—Commercial forest land on which stocking of trees is less than 16.7 percent.

**Timber removals from growing stock.**—The volume of sound wood in growing-stock trees removed annually for forest products (including roundwood products and logging residues) and for other removals.

**Timber removals from sawtimber.**—The net board-foot volume of live sawtimber trees removed for forest products annually (including roundwood products and logging residues) and for other removals.

**Timber products output.**—All timber products cut from roundwood and byproducts of wood manufacturing plants. Roundwood products include logs, bolts, or other round sections cut from growing-stock trees, cull trees, salvable dead trees, trees on nonforest land, noncommercial species, sapling-size trees, and limbwood. Byproducts from primary manufacturing plants include slabs, edging, trimmings, miscuts, sawdust, shavings, veneer cores and clippings, and screenings of pulp-mills that are used as pulpwood chips or other products.

**Tree biomass.**—The total above-ground volume (including the bark) of all trees 1 to 5 inches in d.b.h., and the total above-ground volume (including the bark) from a 1-foot stump for trees more than 5 inches in d.b.h.

**Tree size class.**—A classification of trees based on diameter at breast height, including sawtimber trees, poletimber trees, saplings, and seedlings.

**Unproductive forest land.**—Forest land incapable of producing 20 cubic feet per acre of annual growth or of yielding crops of industrial wood under natural conditions because of adverse site conditions. (Note: Adverse conditions include shallow soils, dry climate, poor drainage, high elevation, steepness, and rockiness.

**Upper stem portion.**—That part of the bole of sawtimber trees above the saw log top to a minimum top diameter of 4.0 inches outside bark or to the point where the central stem breaks into limbs.

**Urban and other areas.**—Areas within the legal boundaries of cities, and towns; suburban areas developed for residential, industrial, or recreational purposes; schoolyards; cemeteries; roads; railroads; airports; beaches; powerlines; and other rights-of-way; or other nonforest land not included in any other specified land use class.

**Water.**—(a) *Bureau of the Census.*—Streams, sloughs, estuaries, and canals more than  $\frac{1}{8}$  of a statute mile wide; and lakes, reservoirs, and ponds more than 40 acres in area.

(b) *Noncensus.*—The same as the Bureau of the Census, except minimum width of streams, etc. is 120 feet and minimum size of lakes, etc. is 1 acre.

**Windbreak.**—A group of trees less than 120 feet wide used for the protection of soil, cropfields, and buildings in use.

**Wooded pasture.**—Improved pasture with more than 16.7 percent stocking in live trees but less than 25 percent stocking in growing-stock trees. Area is currently improved for grazing or there is other evidence of grazing. (Nonforest land with trees).

**Wooded strips.**—An acre or more of natural continuous forest land that would otherwise meet survey standards for commercial forest land except that it is less than 120 feet wide. (Nonforest land with trees.)

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(In thousand acres)

| Land class                | 1965 <sup>1/</sup> | 1981     |
|---------------------------|--------------------|----------|
| Forest land               |                    |          |
| Commercial forest land    |                    |          |
| Eastern redcedar-hardwood | 2.7                | 27.5     |
| Oak-hickory               | 185.3              | 316.6    |
| Post-blackjack oak        | 27.3               | 30.9     |
| Upland plains hardwoods   | 113.1              | 49.4     |
| Elm-ash-cottonwood        | 192.9              | 289.6    |
| Cottonwood                | 65.0               | 68.1     |
| Willow                    | 8.7                | 4.2      |
| Lowland plains hardwoods  | 220.7              | 265.9    |
| Upland elm-ash-locust     | 228.6              | 110.3    |
| Nonstocked                | 147.2              | 45.4     |
| Subtotal                  | 1,191.5            | 1,207.9  |
| Noncommercial forest land |                    |          |
| Unproductive              | 157.4              | 128.4    |
| Productive-reserved       | 0.9                | 22.4     |
| Subtotal                  | 158.3              | 150.8    |
| Total                     | 1,349.8            | 1,358.7  |
| Nonforest land            | 51,160.9           | 50,979.3 |
| All land                  | 52,510.7           | 52,338.0 |

<sup>1/</sup>Figures have been adjusted from those published after the 1965 survey to conform to 1981 areas because of changes in survey definitions and procedures.



Table 2.--Area of land by land class and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| Land class                                 | All units | Forest Survey Unit |                    |              |
|--|-----------|--------------------|--------------------|--------------|
|  |           | North-eastern unit | South-eastern unit | Western unit |
| FOREST LAND                                |           |                    |                    |              |
| Commercial forest land                     |           |                    |                    |              |
| Unpastured commercial forest               | 925.1     | 401.4              | 284.5              | 139.2        |
| Pastured commercial forest <sup>1/</sup>   | 382.8     | 186.7              | 152.5              | 43.6         |
| Subtotal                                   | 1,207.9   | 588.1              | 437.0              | 182.8        |
| Noncommercial forest land                  |           |                    |                    |              |
| Unproductive                               | 128.4     | 21.0               | 97.0               | 10.4         |
| Productive-reserved                        | 22.4      | 15.1               | 2.3                | 5.0          |
| Subtotal                                   | 150.8     | 36.1               | 99.3               | 15.4         |
| Total                                      | 1,358.7   | 624.2              | 536.3              | 198.2        |
| NONFOREST LAND                             |           |                    |                    |              |
| Nonforest with trees                       |           |                    |                    |              |
| Cropland                                   | 63.0      | 30.2               | 13.6               | 19.2         |
| Improved pasture <sup>2/</sup>             | 533.6     | 139.4              | 225.2              | 169.0        |
| Wooded strips <sup>3/</sup>                | 150.0     | 62.6               | 50.3               | 37.1         |
| Idle farmland                              | 23.9      | 4.1                | 2.5                | 17.3         |
| Marsh                                      | 22.7      | 4.2                | 4.3                | 14.2         |
| Windbreaks <sup>4/</sup>                   | 186.3     | 43.0               | 66.9               | 76.4         |
| Wooded pasture <sup>2/</sup>               | 209.8     | 60.5               | 95.2               | 54.1         |
| Subtotal                                   | 1,189.3   | 344.0              | 458.0              | 387.3        |
| Nonforest without trees                    |           |                    |                    |              |
| Cropland                                   | 32,163.2  | 5,026.1            | 3,850.3            | 23,286.8     |
| Improved pasture <sup>2/</sup>             | 15,827.4  | 1,922.7            | 4,549.0            | 9,355.7      |
| Idle farmland                              | 7.5       | 2.9                | 4.6                | 0            |
| Marsh                                      | 56.3      | 1.5                | 6.9                | 47.9         |
| Other farm-farmstead                       | 198.9     | 67.0               | 35.4               | 96.5         |
| Urban and other                            | 1,417.9   | 374.3              | 338.5              | 705.1        |
| Noncensus water                            | 118.8     | 32.2               | 34.3               | 52.3         |
| Subtotal                                   | 49,790.0  | 7,426.7            | 8,819.0            | 33,544.3     |
| Total                                      | 50,979.3  | 7,770.7            | 9,277.0            | 33,931.6     |
| TOTAL LAND <sup>5/</sup>                   | 52,338.0  | 8,394.9            | 9,813.3            | 34,129.8     |
| WATER (BUREAU OF THE CENSUS) <sup>5/</sup> | 319.5     | 155.9              | 77.5               | 86.1         |
| TOTAL LAND AND WATER <sup>5/</sup>         | 52,657.5  | 8,550.8            | 9,890.8            | 34,215.9     |

<sup>1/</sup>Forest land for which the primary use is wood production, but is used for grazing.

<sup>2/</sup>Includes areas classified as range by the USDA Soil Conservation Service.

<sup>3/</sup>An acre or more of natural continuous forest land less than 120 feet wide that would otherwise meet survey standards.

<sup>4/</sup>A group of trees less than 120 feet wide used for the protection of soil, cropfields, and buildings in use.

<sup>5/</sup>U.S. Department of Commerce, Bureau of the Census. 1980. State/county area measurement reports (unpublished).

Table 3.--Area of land and forest land by county, Kansas, 1981

| County            | Land <sub>1</sub> /<br>area | NORTHEASTERN UNIT |                             |                |                   |                | Nonforest land with trees |                |                      |                |                |
|-------------------|-----------------------------|-------------------|-----------------------------|----------------|-------------------|----------------|---------------------------|----------------|----------------------|----------------|----------------|
|                   |                             | Forest land       |                             | Percent        |                   |                | All                       |                |                      | Other          |                |
|                   |                             | All forest        | Non-commercial <sup>1</sup> | Commercial     | commercial forest | Percent        | nonforest with trees      | Wooded strips  | nonforest with trees | Percent        | Percent        |
|                   |                             | Thousand acres    | Thousand acres              | Thousand acres | Thousand acres    | Thousand acres | Thousand acres            | Thousand acres | Thousand acres       | Thousand acres | Thousand acres |
| Atchison          | 275.7                       | 24.8              | 1.0                         | 23.8           | 8.6               | 8.3            | 1.8                       | 6.5            | 3.0                  |                |                |
| Brown             | 365.8                       | 19.7              | 1.0                         | 18.7           | 5.1               | 9.5            | 1.3                       | 8.2            | 2.6                  |                |                |
| Clay              | 404.2                       | 16.0              | 0.7                         | 15.3           | 3.8               | 5.0            | 0.9                       | 4.1            | 1.2                  |                |                |
| Dickinson         | 545.4                       | 14.0              | 0.5                         | 13.5           | 2.5               | 7.0            |                           | 5.8            | 1.3                  |                |                |
| Doniphan          | 248.0                       | 29.9              | 1.2                         | 28.7           | 11.6              | 12.9           | 1.9                       | 11.0           | 5.2                  |                |                |
| Douglas           | 294.9                       | 30.0              | 1.9                         | 28.1           | 9.5               | 20.5           | 2.5                       | 18.0           | 7.0                  |                |                |
| Franklin          | 369.4                       | 27.3              | 1.6                         | 25.7           | 7.0               | 14.6           | 2.5                       | 12.1           | 4.0                  |                |                |
| Geary             | 241.2                       | 21.1              | 2.5                         | 18.6           | 7.7               | 9.5            | 1.5                       | 8.0            | 3.9                  |                |                |
| Jackson           | 420.9                       | 33.5              | 1.1                         | 32.4           | 7.7               | 24.2           | 6.4                       | 17.8           | 5.7                  |                |                |
| Jefferson         | 342.6                       | 43.5              | 2.5                         | 41.0           | 12.0              | 22.6           | 3.0                       | 19.6           | 6.6                  |                |                |
| Johnson           | 305.9                       | 27.4              | 1.4                         | 26.0           | 8.5               | 13.7           | 2.1                       | 11.6           | 4.5                  |                |                |
| Leavenworth       | 296.0                       | 45.8              | 2.5                         | 43.3           | 14.6              | 23.2           | 5.9                       | 17.3           | 7.8                  |                |                |
| Marshall          | 561.7                       | 31.5              | 1.8                         | 29.7           | 5.3               | 30.4           | 4.0                       | 26.4           | 5.4                  |                |                |
| Miami             | 377.5                       | 47.9              | 1.6                         | 46.3           | 12.3              | 23.0           | 5.2                       | 17.8           | 6.1                  |                |                |
| Nemaha            | 459.9                       | 16.9              | 0.6                         | 16.3           | 3.5               | 7.3            | 1.8                       | 5.5            | 1.6                  |                |                |
| Osage             | 444.7                       | 34.4              | 3.2                         | 31.2           | 7.0               | 21.1           | 3.4                       | 17.7           | 4.7                  |                |                |
| Pottawatomie      | 529.8                       | 44.4              | 3.5                         | 40.9           | 7.7               | 20.4           | 3.7                       | 16.7           | 3.9                  |                |                |
| Riley             | 379.6                       | 35.0              | 2.8                         | 32.2           | 8.5               | 20.1           | 2.2                       | 17.9           | 5.3                  |                |                |
| Shawnee           | 351.2                       | 26.9              | 1.3                         | 25.6           | 7.3               | 14.8           | 2.2                       | 12.6           | 4.2                  |                |                |
| Wabaunsee         | 510.1                       | 31.8              | 2.5                         | 29.3           | 5.7               | 15.7           | 3.2                       | 12.5           | 3.1                  |                |                |
| Washington        | 575.0                       | 14.8              | 0.5                         | 14.3           | 2.5               | 18.4           | 5.4                       | 13.0           | 3.2                  |                |                |
| Wyandotte         | 95.4                        | 7.6               | 0.4                         | 7.2            | 7.5               | 1.8            | 0.5                       | 1.3            | 1.9                  |                |                |
| All counties      | 8,394.9                     | 624.2             | 36.1                        | 588.1          | 7.0               | 344.0          | 62.6                      | 281.4          | 4.1                  |                |                |
| SOUTHEASTERN UNIT |                             |                   |                             |                |                   |                |                           |                |                      |                |                |
| Allen             | 323.3                       | 11.4              | 1.4                         | 10.0           | 3.1               | 17.3           | 2.2                       | 15.1           | 5.4                  |                |                |
| Anderson          | 373.5                       | 19.5              | 3.9                         | 15.6           | 4.2               | 18.9           | 2.1                       | 16.8           | 5.1                  |                |                |
| Bourbon           | 408.4                       | 43.4              | 8.3                         | 35.1           | 8.6               | 48.1           | 2.0                       | 46.1           | 11.8                 |                |                |
| Butler            | 923.7                       | 24.1              | 2.9                         | 21.2           | 2.3               | 36.4           | 6.5                       | 29.9           | 3.9                  |                |                |
| Chase             | 497.2                       | 10.5              | 0.6                         | 9.9            | 2.0               | 14.4           | 2.1                       | 12.3           | 2.9                  |                |                |
| Chautauqua        | 412.0                       | 67.8              | 19.3                        | 48.5           | 11.8              | 29.3           | 3.0                       | 26.3           | 7.1                  |                |                |
| Cherokee          | 377.9                       | 27.0              | 5.0                         | 22.0           | 5.8               | 27.1           | 2.8                       | 24.3           | 7.2                  |                |                |
| Coffey            | 393.6                       | 12.5              | 2.5                         | 10.0           | 2.5               | 13.8           | 0.9                       | 12.9           | 3.5                  |                |                |
| Cowley            | 721.7                       | 28.1              | 2.8                         | 25.3           | 3.5               | 14.4           | 2.9                       | 11.5           | 2.0                  |                |                |
| Crawford          | 380.7                       | 24.2              | 2.4                         | 21.8           | 5.7               | 27.2           | 3.3                       | 23.9           | 7.1                  |                |                |
| Elk               | 416.0                       | 37.4              | 9.7                         | 27.7           | 6.7               | 16.7           | 1.5                       | 15.2           | 4.0                  |                |                |
| Greenwood         | 726.2                       | 29.0              | 3.8                         | 25.2           | 3.5               | 34.5           | 5.1                       | 29.4           | 4.8                  |                |                |
| Labette           | 417.8                       | 20.2              | 4.2                         | 16.0           | 3.8               | 18.2           | 1.0                       | 17.2           | 4.4                  |                |                |
| Linn              | 384.5                       | 56.6              | 7.9                         | 48.7           | 12.7              | 24.9           | 3.2                       | 21.7           | 6.5                  |                |                |
| Lyon              | 540.5                       | 12.4              | 1.2                         | 11.2           | 2.1               | 11.5           | 2.4                       | 9.1            | 2.1                  |                |                |
| Marion            | 604.2                       | 9.3               | 1.9                         | 7.4            | 1.2               | 6.6            | 0.8                       | 5.8            | 1.1                  |                |                |
| Montgomery        | 413.3                       | 29.4              | 6.5                         | 22.9           | 5.5               | 19.7           | 2.2                       | 17.5           | 4.8                  |                |                |
| Morris            | 443.3                       | 7.8               | 0.9                         | 6.9            | 1.6               | 6.8            | 1.4                       | 5.4            | 1.5                  |                |                |
| Neosho            | 368.7                       | 17.1              | 3.3                         | 13.8           | 3.7               | 16.2           | 1.1                       | 15.1           | 4.4                  |                |                |
| Wilson            | 368.0                       | 32.8              | 7.6                         | 25.2           | 6.8               | 40.8           | 2.3                       | 38.5           | 11.1                 |                |                |
| Woodson           | 313.8                       | 15.8              | 3.2                         | 12.6           | 4.0               | 15.2           | 1.5                       | 13.7           | 4.8                  |                |                |
| All counties      | 9,813.3                     | 536.3             | 99.3                        | 437.0          | 4.5               | 458.0          | 50.3                      | 407.7          | 4.7                  |                |                |

(Table 3 continued on next page)

1/U.S. Department of Commerce, Bureau of the Census. 1980. State/county area measurement reports (unpublished).

(Table 3 continued)

WES FERR - JNLF

| County    | Land area | Forest land    |                |                | Nonforest land with trees |                          |                |                            |
|-----------|-----------|----------------|----------------|----------------|---------------------------|--------------------------|----------------|----------------------------|
|           |           | All forest     | Non-commercial | Commercial     | Percent commercial forest | All nonforest with trees | Wooded strips  | Other nonforest with trees |
|           |           | Thousand acres | Thousand acres | Thousand acres | Percent                   | Thousand acres           | Thousand acres | Percent                    |
| Barber    | 727.2     | 6.9            | 0.3            | 6.6            | 0.9                       | 17.5                     | 2.2            | 15.3                       |
| Barton    | 573.1     | 1.1            | --             | 1.1            | 0.2                       | 0.5                      | 0.1            | 0.4                        |
| Cheyenne  | 653.4     | 2.7            | --             | 2.7            | 0.4                       | 6.2                      | 1.7            | 4.5                        |
| Clark     | 624.0     | 5.1            | 0.4            | 4.7            | 0.8                       | 8.3                      | 0.6            | 7.7                        |
| Cloud     | 459.3     | 8.7            | 0.1            | 8.6            | 1.9                       | 5.5                      | 0.1            | 5.4                        |
| Comanche  | 504.8     | 1.2            | 0.2            | 1.0            | 0.2                       | 5.8                      | 0.4            | 5.4                        |
| Decatur   | 572.0     | 2.3            | --             | 2.3            | 0.4                       | 2.1                      | 0.8            | 1.3                        |
| Edwards   | 396.5     | 1.7            | --             | 1.7            | 0.4                       | 1.3                      | 0.2            | 1.1                        |
| Ellis     | 576.3     | 2.7            | --             | 2.7            | 0.5                       | 4.0                      | 0.3            | 3.7                        |
| Ellsworth | 458.9     | 3.1            | --             | 3.1            | 0.7                       | 3.0                      | 0.6            | 2.4                        |
| Finney    | 833.3     | 0.4            | --             | 0.4            | --                        | 0.4                      | 0.1            | 0.3                        |
| Ford      | 703.2     | 0.9            | 0.2            | 0.7            | 0.1                       | 5.7                      | 0.4            | 5.3                        |
| Gove      | 686.0     | 0.1            | --             | 0.1            | --                        | 1.8                      | --             | 1.8                        |
| Graham    | 575.0     | 4.9            | 0.2            | 4.7            | 0.8                       | 7.4                      | 1.0            | 6.4                        |
| Grant     | 368.1     | 0.3            | 0.2            | 0.1            | --                        | 2.9                      | 0.1            | 2.8                        |
| Gray      | 555.2     | 2.3            | --             | 2.3            | 0.4                       | 0.5                      | 0.1            | 0.4                        |
| Greeley   | 498.2     | 0.1            | --             | 0.1            | --                        | 0.3                      | --             | 0.3                        |
| Hamilton  | 638.4     | 3.5            | 0.2            | 3.3            | 0.5                       | 3.0                      | 0.4            | 2.6                        |
| Harper    | 513.3     | 5.1            | 0.4            | 4.7            | 0.9                       | 17.7                     | 1.4            | 16.3                       |
| Harvey    | 345.9     | 1.9            | 0.2            | 1.7            | 0.5                       | 6.8                      | 0.7            | 6.1                        |
| Haskell   | 369.7     | --             | --             | --             | --                        | --                       | --             | --                         |
| Hodgeman  | 550.7     | --             | --             | --             | --                        | 0.1                      | 0.1            | 0.1                        |
| Jewell    | 582.2     | 11.1           | 1.3            | 9.8            | 1.7                       | 12.1                     | 1.5            | 10.6                       |
| Kearny    | 555.3     | 0.7            | 0.2            | 0.5            | 0.1                       | 0.3                      | --             | 0.3                        |
| Kingman   | 553.9     | 8.0            | 1.0            | 7.0            | 1.3                       | 21.6                     | 1.6            | 20.0                       |
| Kiowa     | 462.6     | 0.7            | 0.1            | 0.6            | 0.1                       | 2.5                      | 1.2            | 1.3                        |
| Lane      | 459.1     | 0.1            | --             | 0.1            | --                        | --                       | --             | --                         |
| Lincoln   | 460.6     | 3.3            | 0.2            | 3.1            | 0.7                       | 8.1                      | 0.9            | 7.2                        |
| Logan     | 686.9     | 1.0            | --             | 1.0            | 0.1                       | 0.4                      | 0.1            | 0.3                        |
| McPherson | 576.1     | 4.0            | 0.2            | 3.8            | 0.7                       | 6.0                      | 0.7            | 5.3                        |
| Meade     | 626.3     | 2.1            | 0.2            | 1.9            | 0.3                       | 1.6                      | 0.1            | 1.5                        |
| Mitchell  | 459.1     | 8.4            | 1.4            | 7.0            | 1.5                       | 24.8                     | 1.5            | 23.3                       |
| Morton    | 467.9     | 2.6            | 0.2            | 2.4            | 0.5                       | 1.6                      | 0.4            | 1.2                        |
| Ness      | 687.7     | 0.4            | --             | 0.4            | 0.1                       | 0.1                      | --             | 0.1                        |
| Norton    | 558.6     | 3.3            | 0.3            | 3.0            | 0.5                       | 5.7                      | 0.7            | 5.0                        |
| Osborne   | 564.4     | 6.5            | 0.2            | 6.3            | 1.1                       | 6.1                      | 0.7            | 5.4                        |
| Ottawa    | 461.3     | 7.3            | 0.6            | 6.7            | 1.5                       | 9.0                      | 0.3            | 8.7                        |
| Pawnee    | 483.1     | 2.3            | 0.4            | 1.9            | 0.4                       | 8.5                      | 1.6            | 6.9                        |
| Phillips  | 567.5     | 7.4            | 1.4            | 6.0            | 1.1                       | 22.4                     | 1.7            | 20.7                       |
| Pratt     | 470.5     | 1.6            | --             | 1.6            | 0.3                       | 0.6                      | 0.1            | 0.5                        |
| Rawlins   | 684.4     | 2.2            | 0.2            | 2.0            | 0.3                       | 1.8                      | 0.4            | 1.4                        |
| Reno      | 805.6     | 7.3            | 1.0            | 6.3            | 0.8                       | 23.9                     | 0.9            | 23.0                       |
| Republic  | 459.9     | 8.7            | 0.5            | 8.2            | 1.8                       | 10.8                     | 0.9            | 9.9                        |
| Rice      | 465.9     | 1.8            | 0.2            | 1.6            | 0.3                       | 3.4                      | 0.2            | 3.2                        |
| Rooks     | 568.7     | 6.9            | 0.5            | 6.4            | 1.1                       | 16.3                     | 1.4            | 14.9                       |
| Rush      | 459.5     | 0.1            | --             | 0.1            | --                        | 0.2                      | 0.1            | 0.1                        |
| Russell   | 556.4     | 4.6            | 0.1            | 4.5            | 0.8                       | 1.5                      | 0.2            | 1.3                        |

(Table 3 continued on next page)

(Table 3 continued)

| County       | WESTERN UNIT      |                   |                    |                   |                                 |                                |                   |                                  |                                    |         |
|--------------|-------------------|-------------------|--------------------|-------------------|---------------------------------|--------------------------------|-------------------|----------------------------------|------------------------------------|---------|
|              | Forest land       |                   |                    |                   |                                 | Nonforest land with trees      |                   |                                  |                                    |         |
|              | Land<br>area      | All<br>forest     | Non-<br>commercial | Commercial        | Percent<br>commercial<br>forest | All<br>nonforest<br>with trees | Wooded<br>strips  | Other<br>nonforest<br>with trees | Percent<br>nonforest<br>with trees | Percent |
|              |                   |                   |                    |                   |                                 |                                |                   |                                  |                                    |         |
|              | Thousand<br>acres | Thousand<br>acres | Thousand<br>acres  | Thousand<br>acres | Percent                         | Thousand<br>acres              | Thousand<br>acres | Thousand<br>acres                | Percent                            | Percent |
| Saline       | 461.6             | 3.4               | 0.3                | 3.1               | 0.7                             | 9.0                            | 0.4               | 8.6                              | 1.9                                |         |
| Scott        | 459.2             | 0.1               | --                 | 0.1               | --                              | --                             | --                | --                               | --                                 |         |
| Sedgwick     | 644.7             | 8.0               | 1.2                | 6.8               | 1.1                             | 19.1                           | 0.7               | 18.4                             | 3.0                                |         |
| Seward       | 409.7             | 2.1               | 0.1                | 2.0               | 0.5                             | 3.1                            | 0.6               | 2.5                              | 0.8                                |         |
| Sheridan     | 573.5             | 1.2               | --                 | 1.2               | 0.2                             | 0.6                            | 0.1               | 0.5                              | 0.1                                |         |
| Sherman      | 676.4             | --                | --                 | --                | --                              | --                             | --                | --                               | --                                 |         |
| Smith        | 574.0             | 3.6               | --                 | 3.6               | 0.6                             | 5.7                            | 3.9               | 1.8                              | 1.0                                |         |
| Stafford     | 504.0             | 3.7               | 0.2                | 3.5               | 0.7                             | 10.1                           | 0.4               | 9.7                              | 2.0                                |         |
| Stanton      | 435.6             | --                | --                 | --                | --                              | 0.9                            | --                | 0.9                              | 0.2                                |         |
| Stevens      | 465.6             | 0.6               | --                 | 0.6               | 0.1                             | 0.4                            | 0.1               | 0.3                              | 0.1                                |         |
| Sumner       | 757.4             | 15.7              | 0.5                | 15.2              | 2.0                             | 39.6                           | 2.1               | 37.5                             | 5.2                                |         |
| Thomas       | 687.7             | 0.3               | --                 | 0.3               | --                              | 0.2                            | --                | 0.2                              | --                                 |         |
| Trego        | 569.8             | 1.8               | 0.3                | 1.5               | 0.3                             | 5.9                            | 0.3               | 5.6                              | 1.0                                |         |
| Wallace      | 584.7             | 0.3               | 0.2                | 0.1               | --                              | 2.6                            | 0.1               | 2.5                              | 0.4                                |         |
| Wichita      | 459.9             | --                | --                 | --                | --                              | --                             | --                | --                               | --                                 |         |
| All counties | 34,129.8          | 198.2             | 15.4               | 182.8             | 0.5                             | 387.3                          | 37.1              | 350.2                            | 1.1                                |         |
| All units    | 52,338.0          | 1,358.7           | 150.8              | 1,207.9           | 2.3                             | 1,180.3                        | 150.0             | 1,039.3                          | 2.3                                |         |

Table 4.--Area of commercial forest land by ownership class and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| Ownership class       | All     |       |       | North-<br>eastern |       | South-<br>eastern |       | Western |       |
|-----------------------|---------|-------|-------|-------------------|-------|-------------------|-------|---------|-------|
|                       | Units   | Units | Units | Unit              | Unit  | Unit              | Unit  | Unit    | Unit  |
| National Forest       | --      | --    | --    | --                | --    | --                | --    | --      | --    |
| Miscellaneous federal | 36.6    | 26.2  | 8.3   | 2.1               | 2.1   | 2.1               | 2.1   | 2.1     | 2.1   |
| Indian                | 4.0     | 4.0   | --    | --                | --    | --                | --    | --      | --    |
| State                 | 7.5     | --    | 5.0   | 2.5               | 2.5   | 2.5               | 2.5   | 2.5     | 2.5   |
| County and municipal  | 2.3     | 1.2   | 1.1   | --                | --    | --                | --    | --      | --    |
| Farmer                | 749.5   | 338.7 | 284.1 | 126.7             | 126.7 | 126.7             | 126.7 | 126.7   | 126.7 |
| Miscellaneous private | 408.0   | 218.0 | 138.5 | 51.5              | 51.5  | 51.5              | 51.5  | 51.5    | 51.5  |
| All owners            | 1,207.9 | 588.1 | 437.0 | 182.8             | 182.8 | 182.8             | 182.8 | 182.8   | 182.8 |

Table 5.--Area of commercial forest land by ownership class and forest type, Kansas, 1981  
(In thousand acres)

| Ownership class       | All types | Forest type               |             |                    |                         |                    |            |        |                          |                       |             |
|-----------------------|-----------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                       |           | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| National Forest       | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Miscellaneous federal | 36.6      | 1.6                       | 6.8         | 1.2                | 2.5                     | 8.6                | 3.0        | --     | 7.1                      | 5.8                   | --          |
| Indian                | 4.0       | --                        | 1.2         | --                 | --                      | 1.6                | --         | --     | --                       | 1.2                   | --          |
| State                 | 7.5       | --                        | 2.5         | --                 | --                      | 1.1                | 2.5        | --     | --                       | --                    | 1.4         |
| County and municipal  | 2.3       | --                        | --          | --                 | 1.1                     | 1.2                | --         | --     | --                       | --                    | --          |
| Farmer                | 749.5     | 18.7                      | 184.4       | 22.6               | 26.8                    | 182.2              | 35.2       | 1.0    | 186.6                    | 63.3                  | 28.7        |
| Miscellaneous private | 408.0     | 7.2                       | 121.7       | 7.1                | 19.0                    | 94.9               | 27.4       | 3.2    | 72.2                     | 40.0                  | 15.3        |
| All owners            | 1,207.9   | 27.5                      | 315.6       | 30.9               | 49.4                    | 289.6              | 68.1       | 4.2    | 265.9                    | 110.3                 | 45.4        |

Table 6.--Area of commercial forest land by ownership class and site class, Kansas, 1981  
(In thousand acres)

| Ownership class       | All classes | Site class (cubic feet of growth/acre/year) |        |       |       |    |
|-----------------------|-------------|---|--------|-------|-------|----|
|                       |             | 119+  | 85-119 | 50-84 | 20-49 | -- |
| National Forest       | --          | --  | --     | --    | --    | -- |
| Miscellaneous federal | 36.6        | --  | 3.7    | 16.8  | 16.1  | -- |
| Indian                | 4.0         | --  | --     | --    | 4.0   | -- |
| State                 | 7.5         | --  | 2.2    | 1.3   | 4.0   | -- |
| County and municipal  | 2.3         | --  | 2.3    | --    | --    | -- |
| Farmer                | 749.5       | 3.4   | 89.0   | 297.7 | 359.4 | -- |
| Miscellaneous private | 408.0       | 1.2   | 60.7   | 171.6 | 174.5 | -- |
| All owners            | 1,207.9     | 4.6   | 157.9  | 487.4 | 558.0 | -- |

Table 7.--Area of commercial forest land by ownership class and ownership size class, Kansas, 1981  
(In thousand acres)

| Ownership class       | All classes | Ownership size class (acres) |       |       |       |        |         |           |             |        |    |
|-----------------------|-------------|------------------------------|-------|-------|-------|--------|---------|-----------|-------------|--------|----|
|                       |             | 1-5                          | 5-10  | 10-20 | 20-50 | 50-100 | 100-500 | 500-2,500 | 2,500-5,000 | 5,000+ | -- |
| National Forest       | --          | --                           | --    | --    | --    | --     | --      | --        | --          | --     | -- |
| Miscellaneous federal | 36.6        | --                           | --    | --    | --    | --     | --      | --        | --          | 36.6   | -- |
| Indian                | 4.0         | --                           | --    | --    | --    | --     | --      | --        | --          | 4.0    | -- |
| State                 | 7.5         | --                           | --    | --    | --    | --     | --      | --        | --          | 7.5    | -- |
| County and municipal  | 2.3         | --                           | --    | --    | --    | --     | --      | 2.3       | --          | --     | -- |
| Farmer                | 749.5       | 12.6                         | 89.8  | 171.1 | 299.4 | 118.0  | 56.5    | 2.1       | --          | --     | -- |
| Miscellaneous private | 408.0       | 18.4                         | 43.0  | 101.2 | 101.9 | 76.6   | 38.5    | 19.8      | --          | 8.6    | -- |
| All owners            | 1,207.9     | 31.0                         | 132.8 | 272.3 | 401.3 | 194.6  | 95.0    | 24.2      | --          | 56.7   | -- |

Table 8.--Area of commercial forest land by ownership class, stand-size class, and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| Ownership class       | ALL UNITS  |                  |                   |                             |                  |
|-----------------------|------------|------------------|-------------------|-----------------------------|------------------|
|                       | All stands | Stand-size class |                   |                             |                  |
|                       |            | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
| National Forest       | --         | --               | --                | --                          | --               |
| Miscellaneous federal | 36.6       | 18.1             | 4.4               | 14.1                        | --               |
| Indian                | 4.0        | 1.2              | --                | 2.8                         | --               |
| State                 | 7.5        | 3.6              | 2.5               | --                          | 1.4              |
| County and municipal  | 2.3        | 2.3              | --                | --                          | --               |
| Farmer                | 749.5      | 357.0            | 139.7             | 224.1                       | 28.7             |
| Miscellaneous private | 408.0      | 182.8            | 87.8              | 122.1                       | 15.3             |
| All owners            | 1,207.9    | 565.0            | 234.4             | 363.1                       | 45.4             |
| NORTHEASTERN UNIT     |            |                  |                   |                             |                  |
| National Forest       | --         | --               | --                | --                          | --               |
| Miscellaneous federal | 26.2       | 13.4             | 1.1               | 11.7                        | --               |
| Indian                | 4.0        | 1.2              | --                | 2.8                         | --               |
| State                 | --         | --               | --                | --                          | --               |
| County and municipal  | 1.2        | 1.2              | --                | --                          | --               |
| Farmer                | 338.7      | 146.3            | 62.0              | 116.3                       | 14.1             |
| Miscellaneous private | 218.0      | 80.9             | 49.2              | 82.7                        | 5.2              |
| All owners            | 588.1      | 243.0            | 112.3             | 213.5                       | 19.3             |
| SOUTHEASTERN UNIT     |            |                  |                   |                             |                  |
| National Forest       | --         | --               | --                | --                          | --               |
| Miscellaneous federal | 8.3        | 4.7              | 1.2               | 2.4                         | --               |
| Indian                | --         | --               | --                | --                          | --               |
| State                 | 5.0        | 3.6              | --                | --                          | 1.4              |
| County and municipal  | 1.1        | 1.1              | --                | --                          | --               |
| Farmer                | 284.1      | 127.0            | 58.9              | 94.1                        | 4.1              |
| Miscellaneous private | 138.5      | 56.0             | 36.5              | 35.9                        | 10.1             |
| All owners            | 437.0      | 192.4            | 96.6              | 132.4                       | 15.6             |
| WESTERN UNIT          |            |                  |                   |                             |                  |
| National Forest       | --         | --               | --                | --                          | --               |
| Miscellaneous federal | 2.1        | --               | 2.1               | --                          | --               |
| Indian                | --         | --               | --                | --                          | --               |
| State                 | 2.5        | --               | 2.5               | --                          | --               |
| County and municipal  | --         | --               | --                | --                          | --               |
| Farmer                | 126.7      | 83.7             | 18.8              | 13.7                        | 10.5             |
| Miscellaneous private | 51.5       | 45.9             | 2.1               | 3.5                         | --               |
| All owners            | 182.8      | 129.6            | 25.5              | 17.2                        | 10.5             |

Table 9.--Area of commercial forest land by ownership class and area-condition class, Kansas, 1981

(In thousand acres)

| Ownership class       | All classes | Area-condition class |       |       |              |
|-----------------------|-------------|----------------------|-------|-------|--------------|
|                       |             | 70                   | 60    | 50    | 40 or better |
| National Forest       | --          | --                   | --    | --    | --           |
| Miscellaneous federal | 36.6        | 8.9                  | 23.3  | 4.4   | --           |
| Indian                | 4.0         | 4.0                  | --    | --    | --           |
| State                 | 7.5         | 1.5                  | 5.0   | 1.0   | --           |
| County and municipal  | 2.3         | --                   | 2.3   | --    | --           |
| Farmer                | 749.5       | 360.9                | 335.0 | 53.6  | --           |
| Miscellaneous private | 408.0       | 179.2                | 183.8 | 45.0  | --           |
| All owners            | 1,207.9     | 554.5                | 549.4 | 104.0 | --           |

Table 10.--Area of commercial forest land by ownership class and stand-volume class, Kansas, 1981  
(In thousand acres)

| Ownership class       | All classes | Stand-volume class (board feet <sup>1</sup> /per acre) |                |        |
|-----------------------|-------------|--|----------------|--------|
|                       |             | Less than 1,500  | 1,500 to 5,000 | 5,000+ |
| National Forest       | --          | --   | --             | --     |
| Miscellaneous federal | 36.6        | 15.8   | 12.4           | 8.4    |
| Indian                | 4.0         | 2.8  | 1.2            | --     |
| State                 | 7.5         | 4.0  | --             | 3.5    |
| County and municipal  | 2.3         | --   | 1.2            | 1.1    |
| Farmer                | 749.5       | 401.6  | 274.5          | 73.4   |
| Miscellaneous private | 408.0       | 221.4  | 139.6          | 47.0   |
| All owners            | 1,207.9     | 645.6  | 428.9          | 133.4  |

<sup>1</sup>/ International 1/4-inch rule.

Table 11.--Area of commercial forest land by county and forest type, Kansas, 1981  
(In thousand acres)

| NORTHEASTERN UNIT |           |                           |             |                    |                         |                    |            |        |                          |                       |               |
|-------------------|-----------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|---------------|
| County            | All types | Forest type               |             |                    |                         |                    |            |        |                          |                       |               |
|                   |           | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-ash-stock |
| Atchison          | 23.8      | 0.6                       | 9.1         | --                 | 1.1                     | 3.7                | 0.6        | 0.2    | 5.6                      | 2.5                   | 0.4           |
| Brown             | 18.7      | 0.5                       | 8.2         | --                 | 0.8                     | 2.9                | 0.1        | 0.1    | 3.4                      | 2.4                   | 0.3           |
| Clay              | 15.3      | 0.2                       | 3.4         | 0.1                | 0.8                     | 2.9                | 0.8        | 0.2    | 5.1                      | 1.5                   | 0.3           |
| Dickinson         | 13.5      | 0.1                       | 3.8         | --                 | 0.6                     | 2.3                | 0.6        | 0.2    | 4.3                      | 1.4                   | 0.2           |
| Doniphan          | 28.7      | 1.0                       | 9.7         | --                 | 1.5                     | 5.1                | 0.6        | 0.4    | 6.0                      | 3.7                   | 0.7           |
| Douglas           | 28.1      | 0.8                       | 10.7        | 0.2                | 1.4                     | 4.5                | 0.1        | --     | 4.4                      | 5.3                   | 0.7           |
| Franklin          | 25.7      | 0.7                       | 8.6         | 0.1                | 1.3                     | 4.7                | 0.3        | 0.1    | 4.7                      | 4.3                   | 0.9           |
| Geary             | 18.6      | 0.6                       | 5.4         | --                 | 1.0                     | 3.1                | 0.8        | 0.1    | 4.6                      | 2.5                   | 0.5           |
| Jackson           | 32.4      | 0.7                       | 6.5         | --                 | 1.1                     | 9.1                | 0.7        | 0.3    | 6.2                      | 5.4                   | 2.4           |
| Jefferson         | 41.0      | 0.7                       | 15.0        | 0.2                | 2.1                     | 6.6                | 0.9        | --     | 7.5                      | 6.6                   | 1.4           |
| Johnson           | 26.0      | 0.9                       | 8.5         | --                 | 1.1                     | 4.7                | 0.4        | 0.2    | 6.4                      | 3.4                   | 0.4           |
| Leavenworth       | 43.3      | 0.3                       | 13.5        | 0.1                | 2.2                     | 7.2                | 2.4        | 0.1    | 9.4                      | 5.6                   | 2.5           |
| Marshall          | 29.7      | 1.2                       | 7.2         | 0.1                | 1.2                     | 6.3                | 0.5        | 0.6    | 6.9                      | 4.7                   | 1.0           |
| Miami             | 46.3      | 1.5                       | 15.8        | --                 | 1.8                     | 8.3                | 0.6        | 0.3    | 10.9                     | 5.9                   | 1.2           |
| Nemaha            | 16.3      | 0.4                       | 3.3         | --                 | 0.6                     | 4.4                | 0.4        | 0.2    | 3.3                      | 2.7                   | 1.0           |
| Osage             | 31.2      | 1.2                       | 9.9         | 0.1                | 1.5                     | 5.9                | 0.9        | 0.2    | 7.1                      | 3.8                   | 0.6           |
| Pottawatomie      | 40.9      | 1.6                       | 12.7        | 0.1                | 1.9                     | 7.7                | 1.1        | 0.2    | 9.1                      | 6.0                   | 0.5           |
| Riley             | 32.2      | 1.5                       | 9.9         | 0.1                | 1.6                     | 5.5                | 0.7        | 0.2    | 7.3                      | 4.8                   | 0.6           |
| Shawnee           | 25.6      | 0.6                       | 7.3         | --                 | 1.0                     | 5.3                | 0.5        | 0.2    | 6.1                      | 3.8                   | 0.8           |
| Wabaunsee         | 29.3      | 0.6                       | 7.4         | 0.1                | 1.4                     | 6.1                | 1.3        | 0.2    | 7.7                      | 3.5                   | 1.0           |
| Washington        | 14.3      | 0.1                       | 3.3         | --                 | 0.5                     | 3.9                | 0.3        | 0.1    | 2.9                      | 1.5                   | 1.7           |
| Wyandotte         | 7.2       | 0.1                       | 3.5         | --                 | 0.3                     | 0.7                | --         | 0.1    | 1.5                      | 0.8                   | 0.2           |
| All counties      | 588.1     | 15.9                      | 182.7       | 1.2                | 26.8                    | 110.9              | 14.6       | 4.2    | 130.4                    | 82.1                  | 19.3          |
| SOUTHEASTERN UNIT |           |                           |             |                    |                         |                    |            |        |                          |                       |               |
| Allen             | 10.0      | 0.1                       | 1.8         | 0.2                | 0.6                     | 2.9                | 0.2        | --     | 3.3                      | 0.5                   | 0.4           |
| Anderson          | 15.6      | 0.6                       | 3.8         | 0.7                | 0.8                     | 4.0                | 0.4        | --     | 3.7                      | 0.9                   | 0.7           |
| Bourbon           | 35.1      | 1.2                       | 14.9        | 3.8                | 1.3                     | 5.6                | --         | --     | 5.6                      | 2.0                   | 0.7           |
| Butler            | 21.2      | 0.1                       | 3.1         | 0.2                | 1.2                     | 8.1                | 0.3        | --     | 6.1                      | 1.1                   | 1.0           |
| Chase             | 9.9       | 0.1                       | 1.6         | 0.1                | 0.5                     | 2.8                | 0.2        | --     | 3.9                      | 0.3                   | 0.4           |
| Chautauqua        | 48.5      | 2.3                       | 14.7        | 6.5                | 3.1                     | 11.2               | 0.3        | --     | 6.2                      | 2.7                   | 1.5           |
| Cherokee          | 22.0      | 0.2                       | 5.6         | 1.9                | 1.5                     | 6.2                | 0.2        | --     | 3.7                      | 1.5                   | 1.2           |
| Coffey            | 10.0      | 0.1                       | 2.9         | 0.7                | 0.7                     | 2.4                | 0.1        | --     | 1.7                      | 0.7                   | 0.7           |
| Cowley            | 25.3      | 0.3                       | 4.8         | 0.6                | 1.2                     | 8.7                | 0.3        | --     | 8.2                      | 0.7                   | 0.5           |
| Crawford          | 21.8      | 0.4                       | 5.2         | 0.7                | 0.9                     | 6.0                | 0.5        | --     | 5.9                      | 1.4                   | 0.8           |
| Elk               | 27.7      | 1.6                       | 7.8         | 2.6                | 1.4                     | 7.2                | 0.3        | --     | 4.4                      | 1.5                   | 0.9           |
| Greenwood         | 25.2      | 0.4                       | 4.4         | 0.7                | 1.5                     | 7.2                | 0.9        | --     | 7.4                      | 1.5                   | 1.2           |
| Labette           | 16.0      | 0.2                       | 4.7         | 1.5                | 1.1                     | 4.0                | 0.1        | --     | 2.5                      | 1.1                   | 0.8           |
| Linn              | 48.7      | 1.7                       | 19.8        | 2.3                | 1.7                     | 7.8                | 0.4        | --     | 10.5                     | 3.0                   | 1.5           |
| Lyon              | 11.2      | 0.1                       | 2.2         | 0.1                | 0.6                     | 3.4                | 0.1        | --     | 4.3                      | 0.2                   | 0.2           |
| Marion            | 7.4       | 0.2                       | 1.5         | 0.3                | 0.3                     | 2.6                | 0.1        | --     | 1.9                      | 0.3                   | 0.2           |
| Montgomery        | 22.9      | 0.7                       | 8.9         | 1.2                | 1.0                     | 3.9                | 0.1        | --     | 4.8                      | 1.4                   | 0.9           |
| Morris            | 6.9       | 0.1                       | 1.6         | 0.1                | 0.3                     | 1.9                | 0.1        | --     | 2.4                      | 0.2                   | 0.2           |
| Neosho            | 13.8      | 0.1                       | 3.7         | 1.3                | 0.9                     | 3.8                | 0.1        | --     | 2.3                      | 1.0                   | 0.6           |
| Wilson            | 25.2      | 0.9                       | 9.6         | 3.1                | 1.1                     | 4.7                | --         | --     | 4.0                      | 1.4                   | 0.4           |
| Woodson           | 12.6      | 0.2                       | 3.5         | 1.1                | 0.9                     | 3.1                | 0.2        | --     | 1.9                      | 0.9                   | 0.8           |
| All counties      | 437.0     | 11.6                      | 126.1       | 29.7               | 22.6                    | 107.5              | 4.9        | --     | 94.7                     | 24.3                  | 15.6          |

(Table 11 continued on next page)



(Table 11 continued)

| County    | All types | WESTERN UNIT              |             |                    |                         |                    |            |        |                          |                |     | Non-stocked |
|-----------|-----------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|----------------|-----|-------------|
|           |           | Forest type               |             |                    |                         |                    |            |        |                          |                |     |             |
|           |           | Eastern redecdar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Elm-ash-locust |     |             |
| Barber    | 6.6       | --                        | 0.2         | --                 | --                      | 2.5                | 2.1        | --     | 1.4                      | 0.1            | 0.3 |             |
| Barton    | 1.1       | --                        | 0.1         | --                 | --                      | 0.4                | 0.3        | --     | 0.2                      | --             | 0.1 |             |
| Cheyenne  | 2.7       | --                        | 0.1         | --                 | --                      | 0.9                | 0.9        | --     | 0.6                      | 0.1            | 0.1 |             |
| Clark     | 4.7       | --                        | 0.1         | --                 | --                      | 1.8                | 1.8        | --     | 0.8                      | --             | 0.2 |             |
| Cloud     | 8.6       | --                        | 0.6         | --                 | --                      | 2.5                | 2.3        | --     | 2.4                      | 0.4            | 0.4 |             |
| Comanche  | 1.0       | --                        | --          | --                 | --                      | 0.5                | 0.2        | --     | 0.3                      | --             | --  |             |
| Decatur   | 2.3       | --                        | 0.1         | --                 | --                      | 0.9                | 0.6        | --     | 0.5                      | 0.1            | 0.1 |             |
| Edwards   | 1.7       | --                        | --          | --                 | --                      | 0.5                | 0.7        | --     | 0.2                      | --             | 0.3 |             |
| Ellis     | 2.7       | --                        | 0.1         | --                 | --                      | 1.0                | 0.6        | --     | 0.8                      | 0.1            | 0.1 |             |
| Ellsworth | 3.1       | --                        | 0.2         | --                 | --                      | 0.9                | 0.8        | --     | 0.9                      | 0.1            | 0.2 |             |
| Finney    | 0.4       | --                        | --          | --                 | --                      | 0.2                | 0.1        | --     | 0.1                      | --             | --  |             |
| Ford      | 0.7       | --                        | --          | --                 | --                      | 0.4                | 0.1        | --     | 0.2                      | --             | --  |             |
| Gove      | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --  |             |
| Graham    | 4.7       | --                        | 0.2         | --                 | --                      | 1.8                | 1.3        | --     | 1.1                      | 0.1            | 0.2 |             |
| Grant     | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --  |             |
| Gray      | 2.3       | --                        | --          | --                 | --                      | 0.3                | 1.9        | --     | 0.1                      | --             | --  |             |
| Greeley   | 0.1       | --                        | --          | --                 | --                      | --                 | 0.1        | --     | --                       | --             | --  |             |
| Hamilton  | 3.3       | --                        | --          | --                 | --                      | 1.8                | 0.7        | --     | 0.5                      | --             | 0.3 |             |
| Harper    | 4.7       | --                        | 0.2         | --                 | --                      | 2.2                | 1.1        | --     | 1.0                      | 0.1            | 0.1 |             |
| Harvey    | 1.7       | --                        | --          | --                 | --                      | 0.9                | 0.4        | --     | 0.3                      | --             | 0.1 |             |
| Haskell   | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --             | --  |             |
| Hodgeman  | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --             | --  |             |
| Jewell    | 9.8       | --                        | 0.2         | --                 | --                      | 4.4                | 2.5        | --     | 2.3                      | 0.1            | 0.3 |             |
| Kearny    | 0.5       | --                        | --          | --                 | --                      | 0.2                | 0.2        | --     | 0.1                      | --             | --  |             |
| Kingman   | 7.0       | --                        | 0.3         | --                 | --                      | 3.1                | 1.6        | --     | 1.6                      | 0.2            | 0.2 |             |
| Kiowa     | 0.6       | --                        | --          | --                 | --                      | 0.2                | 0.1        | --     | 0.1                      | --             | 0.2 |             |
| Lane      | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --  |             |
| Lincoln   | 3.1       | --                        | 0.2         | --                 | --                      | 1.0                | 0.8        | --     | 0.8                      | 0.1            | 0.2 |             |
| Logan     | 1.0       | --                        | --          | --                 | --                      | 0.4                | 0.2        | --     | 0.2                      | --             | 0.2 |             |
| McPherson | 3.8       | --                        | 0.2         | --                 | --                      | 0.9                | 1.3        | --     | 0.9                      | 0.1            | 0.4 |             |
| Meade     | 1.9       | --                        | --          | --                 | --                      | 0.7                | 0.7        | --     | 0.4                      | --             | 0.1 |             |
| Mitchell  | 7.0       | --                        | 0.4         | --                 | --                      | 2.9                | 1.3        | --     | 1.9                      | 0.2            | 0.3 |             |
| Morton    | 2.4       | --                        | --          | --                 | --                      | 1.1                | 0.5        | --     | 0.4                      | 0.1            | 0.3 |             |
| Ness      | 0.4       | --                        | --          | --                 | --                      | 0.1                | 0.1        | --     | 0.1                      | 0.1            | --  |             |
| Norton    | 3.0       | --                        | 0.1         | --                 | --                      | 1.4                | 0.7        | --     | 0.6                      | --             | 0.2 |             |
| Osborne   | 6.3       | --                        | 0.4         | --                 | --                      | 2.3                | 1.6        | --     | 1.5                      | 0.2            | 0.3 |             |
| Ottawa    | 6.7       | --                        | 0.4         | --                 | --                      | 2.9                | 1.2        | --     | 1.7                      | 0.2            | 0.3 |             |
| Pawnee    | 1.9       | --                        | --          | --                 | --                      | 0.8                | 0.5        | --     | 0.5                      | --             | 0.1 |             |
| Phillips  | 6.0       | --                        | 0.2         | --                 | --                      | 2.4                | 1.7        | --     | 1.4                      | 0.1            | 0.2 |             |
| Pratt     | 1.6       | --                        | 0.1         | --                 | --                      | 0.4                | 0.6        | --     | 0.3                      | --             | 0.2 |             |
| Rawlins   | 2.0       | --                        | 0.1         | --                 | --                      | 0.7                | 0.5        | --     | 0.5                      | 0.1            | 0.1 |             |
| Reno      | 6.3       | --                        | 0.3         | --                 | --                      | 3.0                | 1.2        | --     | 1.5                      | 0.1            | 0.2 |             |
| Republic  | 8.2       | --                        | 0.2         | --                 | --                      | 3.1                | 2.5        | --     | 1.6                      | 0.1            | 0.7 |             |
| Rice      | 1.6       | --                        | 0.1         | --                 | --                      | 0.3                | 0.8        | --     | 0.2                      | --             | 0.2 |             |
| Rooks     | 6.4       | --                        | 0.3         | --                 | --                      | 2.6                | 1.8        | --     | 1.3                      | 0.1            | 0.3 |             |
| Rush      | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --  |             |
| Russell   | 4.5       | --                        | 0.3         | --                 | --                      | 1.3                | 1.3        | --     | 1.1                      | 0.1            | 0.4 |             |

(Table 11 continued on next page)

(Table 11 continued)

| WESTERN UNIT |           |                           |             |                    |                         |                    |            |        |                          |                |             |
|--------------|-----------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|----------------|-------------|
| County       | All types | Forest type               |             |                    |                         |                    |            |        |                          |                |             |
|              |           | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Elm-ash-locust | Non-stocked |
| Saline       | 3.1       | --                        | 0.2         | --                 | --                      | 1.1                | 0.6        | --     | 1.0                      | 0.1            | 0.1         |
| Scott        | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --          |
| Sedgwick     | 6.8       | --                        | 0.5         | --                 | --                      | 3.0                | 0.9        | --     | 1.9                      | 0.2            | 0.3         |
| Seward       | 2.0       | --                        | 0.1         | --                 | --                      | 0.7                | 0.6        | --     | 0.5                      | --             | 0.1         |
| Sheridan     | 1.2       | --                        | 0.1         | --                 | --                      | 0.4                | 0.3        | --     | 0.4                      | --             | --          |
| Sherman      | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --             | --          |
| Smith        | 3.6       | --                        | 0.1         | --                 | --                      | 1.5                | 0.9        | --     | 0.8                      | 0.1            | 0.2         |
| Stafford     | 3.5       | --                        | --          | --                 | --                      | 0.5                | 1.8        | --     | 0.4                      | --             | 0.8         |
| Stanton      | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --             | --          |
| Stevens      | 0.6       | --                        | --          | --                 | --                      | 0.3                | 0.1        | --     | 0.2                      | --             | --          |
| Sumner       | 15.2      | --                        | 1.0         | --                 | --                      | 6.6                | 3.3        | --     | 2.8                      | 0.5            | 1.0         |
| Thomas       | 0.3       | --                        | --          | --                 | --                      | 0.1                | 0.2        | --     | --                       | --             | --          |
| Treno        | 1.5       | --                        | 0.1         | --                 | --                      | 0.7                | 0.2        | --     | 0.4                      | --             | 0.1         |
| Wallace      | 0.1       | --                        | --          | --                 | --                      | 0.1                | --         | --     | --                       | --             | --          |
| Wichita      | --        | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --             | --          |
| All counties | 102.8     | --                        | 7.8         | --                 | --                      | 71.2               | 48.6       | --     | 40.8                     | 3.9            | 10.5        |
| All units    | 1,207.9   | 27.5                      | 316.6       | 30.9               | 49.4                    | 299.6              | 63.1       | 4.2    | 265.9                    | 110.3          | 45.4        |

Table 12.--Area of commercial forest land by forest type and stand-age class, Kansas, 1981  
(In thousand acres)

| Forest type               | All<br>classes | Stand-age class (years) |       |       |       |       |       |       |       |       |        |         |         |      |  |
|---------------------------|----------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|------|--|
|                           |                | 1-10                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-140 | 141+ |  |
| Eastern redcedar-hardwood | 27.5           | 12.0                    | 9.0   | 1.0   | 1.6   | --    | 2.5   | --    | --    | --    | --     | --      | 1.4     | --   |  |
| Oak-hickory               | 316.6          | 31.9                    | 41.2  | 17.2  | 27.8  | 28.1  | 29.5  | 29.9  | 29.0  | 19.5  | 24.1   | 24.4    | 11.7    | 2.3  |  |
| Post-blackjack oak        | 30.9           | 1.2                     | 1.2   | 1.2   | 4.5   | 11.9  | 1.3   | 1.3   | 3.6   | 3.5   | --     | 1.2     | --      | --   |  |
| Upland plains hardwoods   | 49.4           | 5.3                     | 9.7   | 3.9   | 6.1   | 4.9   | 5.6   | 7.8   | 1.2   | 1.2   | --     | 1.2     | 2.5     | --   |  |
| Elm-ash-cottonwood        | 289.6          | 30.5                    | 62.0  | 17.5  | 22.2  | 14.5  | 39.2  | 28.8  | 28.5  | 26.9  | 13.4   | 6.1     | --      | --   |  |
| Cottonwood                | 68.1           | 1.2                     | 1.3   | 2.4   | 4.2   | 9.4   | 6.6   | 17.1  | 10.6  | 2.3   | 6.7    | 6.3     | --      | --   |  |
| Willow                    | 4.2            | 1.2                     | 1.2   | .8    | --    | --    | 1.0   | --    | --    | --    | --     | --      | --      | --   |  |
| Lowland plains hardwoods  | 265.9          | 21.6                    | 24.9  | 13.5  | 22.6  | 10.8  | 36.0  | 47.8  | 43.7  | 14.2  | 19.9   | 8.7     | 1.2     | 1.0  |  |
| Upland elm-ash-locust     | 110.3          | 36.8                    | 34.9  | 9.9   | 10.8  | 1.2   | 3.0   | 2.4   | 4.9   | 2.2   | 2.0    | 1.0     | 1.2     | --   |  |
| Nonstocked                | 45.4           | 13.1                    | 7.5   | 7.2   | 3.8   | --    | 7.0   | 2.1   | 3.8   | .9    | --     | --      | --      | --   |  |
| All types                 | 1,207.9        | 154.8                   | 192.9 | 74.6  | 103.6 | 80.8  | 131.7 | 137.2 | 125.3 | 70.7  | 66.1   | 48.9    | 18.0    | 3.3  |  |

Table 13.--Area of commercial forest land by forest type, stand-size class, and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| ALL UNITS                 |            |                  |                   |                             |                  |
|---------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Forest type               | All stands | Stand-size class |                   |                             |                  |
|                           |            | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
| Eastern redcedar-hardwood | 27.5       | 2.7              | 2.8               | 22.0                        | --               |
| Oak-hickory               | 316.6      | 141.9            | 84.0              | 90.7                        | --               |
| Post-blackjack oak        | 30.9       | 8.5              | 17.6              | 4.8                         | --               |
| Upland plains hardwoods   | 49.4       | 18.7             | 16.8              | 13.9                        | --               |
| Elm-ash-cottonwood        | 289.6      | 145.1            | 47.0              | 97.5                        | --               |
| Cottonwood                | 68.1       | 59.6             | 4.9               | 3.6                         | --               |
| Willow                    | 4.2        | 1.0              | 0.8               | 2.4                         | --               |
| Lowland plains hardwoods  | 265.9      | 170.7            | 46.7              | 48.5                        | --               |
| Upland elm-ash-locust     | 110.3      | 16.8             | 13.8              | 79.7                        | --               |
| Nonstocked                | 45.4       | --               | --                | --                          | 45.4             |
| All types                 | 1,207.9    | 565.0            | 234.4             | 363.1                       | 45.4             |
| NORTHEASTERN UNIT         |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | 15.9       | 1.4              | 1.6               | 12.9                        | --               |
| Oak-hickory               | 182.7      | 74.5             | 49.9              | 58.3                        | --               |
| Post-blackjack oak        | 1.2        | 1.2              | --                | --                          | --               |
| Upland plains hardwoods   | 26.8       | 13.1             | 8.6               | 5.1                         | --               |
| Elm-ash-cottonwood        | 110.9      | 46.4             | 13.9              | 50.6                        | --               |
| Cottonwood                | 14.6       | 11.2             | 1.1               | 2.3                         | --               |
| Willow                    | 4.2        | 1.0              | 0.8               | 2.4                         | --               |
| Lowland plains hardwoods  | 130.4      | 78.6             | 27.2              | 24.6                        | --               |
| Upland elm-ash-locust     | 82.1       | 15.6             | 9.2               | 57.3                        | --               |
| Nonstocked                | 19.3       | --               | --                | --                          | 19.3             |
| All types                 | 588.1      | 243.0            | 112.3             | 213.5                       | 19.3             |
| SOUTHEASTERN UNIT         |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | 11.6       | 1.3              | 1.2               | 9.1                         | --               |
| Oak-hickory               | 126.1      | 59.6             | 34.1              | 32.4                        | --               |
| Post-blackjack oak        | 29.7       | 7.3              | 17.6              | 4.8                         | --               |
| Upland plains hardwoods   | 22.6       | 5.6              | 8.2               | 8.8                         | --               |
| Elm-ash-cottonwood        | 107.5      | 52.3             | 17.0              | 38.2                        | --               |
| Cottonwood                | 4.9        | 2.3              | 1.3               | 1.3                         | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | 94.7       | 62.8             | 14.7              | 17.2                        | --               |
| Upland elm-ash-locust     | 24.3       | 1.2              | 2.5               | 20.6                        | --               |
| Nonstocked                | 15.6       | --               | --                | --                          | 15.6             |
| All types                 | 437.0      | 192.4            | 96.6              | 132.4                       | 15.6             |
| WESTERN UNIT              |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | --         | --               | --                | --                          | --               |
| Oak-hickory               | 7.8        | 7.8              | --                | --                          | --               |
| Post-blackjack oak        | --         | --               | --                | --                          | --               |
| Upland plains hardwoods   | --         | --               | --                | --                          | --               |
| Elm-ash-cottonwood        | 71.2       | 46.4             | 16.1              | 8.7                         | --               |
| Cottonwood                | 48.6       | 46.1             | 2.5               | --                          | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | 40.8       | 29.3             | 4.8               | 6.7                         | --               |
| Upland elm-ash-locust     | 3.9        | --               | 2.1               | 1.8                         | --               |
| Nonstocked                | 10.5       | --               | --                | --                          | 10.5             |
| All types                 | 182.8      | 129.6            | 25.5              | 17.2                        | 10.5             |

Table 14.--Area of commercial forest land by forest type,  
stand-size class, and site class, Kansas, 1981

(In thousand acres)

| Forest type and<br>stand-size class | All<br>classes | Site class (cubic feet of growth/acre/year) |        |       |       |
|-------------------------------------|----------------|---|--------|-------|-------|
|                                     |                | 120+  | 85-119 | 50-84 | 20-49 |
| Eastern redcedar-hardwood           |                |   |        |       |       |
| Sawtimber                           | 2.7            | --  | --     | --    | 2.7   |
| Poletimber                          | 2.8            | --  | --     | 1.2   | 1.6   |
| Sapling & seedling                  | 22.0           | --  | --     | 3.4   | 18.6  |
| All stands                          | 27.5           | --  | --     | 4.6   | 22.9  |
| Oak-hickory                         |                |   |        |       |       |
| Sawtimber                           | 141.9          | --  | 21.2   | 72.7  | 48.0  |
| Poletimber                          | 84.0           | --  | 11.7   | 36.8  | 35.5  |
| Sapling & seedling                  | 90.7           | --  | 7.4    | 34.5  | 48.8  |
| All stands                          | 316.6          | --  | 40.3   | 144.0 | 132.3 |
| Post-blackjack oak                  |                |   |        |       |       |
| Sawtimber                           | 8.5            | --  | --     | 1.2   | 7.3   |
| Poletimber                          | 17.6           | --  | --     | 3.5   | 14.1  |
| Sapling & seedling                  | 4.8            | --  | --     | --    | 4.8   |
| All stands                          | 30.9           | --  | --     | 4.7   | 26.2  |
| Upland plains hardwoods             |                |   |        |       |       |
| Sawtimber                           | 18.7           | --  | 3.0    | 9.3   | 6.4   |
| Poletimber                          | 16.8           | --  | 4.0    | 7.2   | 5.6   |
| Sapling & seedling                  | 13.9           | --  | 1.2    | 2.3   | 10.4  |
| All stands                          | 49.4           | --  | 8.2    | 18.8  | 22.4  |
| Elm-ash-cottonwood                  |                |   |        |       |       |
| Sawtimber                           | 145.1          | --  | 27.6   | 65.0  | 52.5  |
| Poletimber                          | 47.0           | --  | 8.9    | 17.8  | 20.3  |
| Sapling & seedling                  | 97.5           | --  | 9.9    | 26.4  | 61.2  |
| All stands                          | 289.6          | --  | 46.4   | 109.2 | 134.0 |
| Cottonwood                          |                |   |        |       |       |
| Sawtimber                           | 59.6           | --  | 4.8    | 21.9  | 32.9  |
| Poletimber                          | 4.9            | --  | --     | --    | 4.9   |
| Sapling & seedling                  | 3.6            | --  | --     | --    | 3.6   |
| All stands                          | 68.1           | --  | 4.8    | 21.9  | 41.4  |
| Willow                              |                |   |        |       |       |
| Sawtimber                           | 1.0            | --  | --     | 1.0   | --    |
| Poletimber                          | 0.8            | --  | --     | 0.8   | --    |
| Sapling & seedling                  | 2.4            | --  | --     | 1.2   | 1.2   |
| All stands                          | 4.2            | --  | --     | 3.0   | 1.2   |
| Lowland plains hardwoods            |                |   |        |       |       |
| Sawtimber                           | 170.7          | 2.1   | 35.5   | 100.7 | 32.4  |
| Poletimber                          | 46.7           | --  | 8.6    | 23.3  | 14.8  |
| Sapling & seedling                  | 48.5           | --  | 10.5   | 24.9  | 13.1  |
| All stands                          | 265.9          | 2.1   | 54.6   | 148.9 | 60.3  |
| Upland elm-ash-locust               |                |   |        |       |       |
| Sawtimber                           | 16.8           | --  | 2.1    | 3.4   | 11.3  |
| Poletimber                          | 13.8           | --  | --     | 2.3   | 11.5  |
| Sapling & seedling                  | 79.7           | --  | --     | 13.0  | 66.7  |
| All stands                          | 110.3          | --  | 2.1    | 18.7  | 89.5  |
| Nonstocked                          | 45.4           | --  | 2.5    | 11.7  | 31.2  |
| All types                           |                |   |        |       |       |
| Sawtimber                           | 565.0          | 2.1   | 94.2   | 275.2 | 193.5 |
| Poletimber                          | 234.4          | --  | 33.2   | 92.9  | 108.3 |
| Sapling & seedling                  | 363.1          | --  | 29.0   | 105.7 | 228.4 |
| Nonstocked                          | 45.4           | --  | 2.5    | 11.7  | 31.2  |
| All stands                          | 1,207.9        | 2.1   | 158.9  | 485.5 | 561.4 |

Table 15.--Area of commercial forest land by forest type, stand-size class,  
and stocking percent, Kansas, 1981

(In thousand acres)

| Forest type and<br>stand-size class | All<br>classes | Stocking percent of growing-stock trees |         |        |         |      |
|-------------------------------------|----------------|---|---------|--------|---------|------|
|                                     |                | Less than<br>16.7                       | 16.7-60 | 61-100 | 101-133 | 134+ |
| Eastern redcedar-hardwood           |                |   |         |        |         |      |
| Sawtimber                           | 2.7            | --                                      | --      | 2.7    | --      | --   |
| Poletimber                          | 2.8            | --                                      | 1.6     | 1.2    | --      | --   |
| Sapling & seedling                  | 22.0           | --                                      | 14.4    | 6.4    | 1.2     | --   |
| All stands                          | 27.5           | --                                      | 16.0    | 10.3   | 1.2     | --   |
| Oak-hickory                         |                |   |         |        |         |      |
| Sawtimber                           | 141.9          | --                                      | 48.4    | 77.2   | 16.3    | --   |
| Poletimber                          | 84.0           | --                                      | 20.6    | 49.4   | 14.0    | --   |
| Sapling & seedling                  | 90.7           | --                                      | 40.1    | 42.5   | 8.1     | --   |
| All stands                          | 316.6          | --                                      | 109.1   | 169.1  | 38.4    | --   |
| Post-blackjack oak                  |                |   |         |        |         |      |
| Sawtimber                           | 8.5            | --                                      | 2.5     | 6.0    | --      | --   |
| Poletimber                          | 17.6           | --                                      | 2.5     | 12.8   | 2.3     | --   |
| Sapling & seedling                  | 4.8            | --                                      | 3.6     | --     | 1.2     | --   |
| All stands                          | 30.9           | --                                      | 8.6     | 18.8   | 3.5     | --   |
| Upland plains hardwoods             |                |   |         |        |         |      |
| Sawtimber                           | 18.7           | --                                      | 11.0    | 7.7    | --      | --   |
| Poletimber                          | 16.8           | --                                      | 11.3    | 5.5    | --      | --   |
| Sapling & seedling                  | 13.9           | --                                      | 6.5     | 7.4    | --      | --   |
| All stands                          | 49.4           | --                                      | 28.8    | 20.6   | --      | --   |
| Elm-ash-cottonwood                  |                |   |         |        |         |      |
| Sawtimber                           | 145.1          | 1.6                                     | 61.2    | 67.4   | 14.9    | --   |
| Poletimber                          | 47.0           | --                                      | 26.2    | 20.8   | --      | --   |
| Sapling & seedling                  | 97.5           | --                                      | 59.9    | 35.1   | 2.5     | --   |
| All stands                          | 289.6          | 1.6                                     | 147.3   | 123.3  | 17.4    | --   |
| Cottonwood                          |                |   |         |        |         |      |
| Sawtimber                           | 59.6           | --                                      | 19.4    | 23.9   | 16.3    | --   |
| Poletimber                          | 4.9            | --                                      | 1.3     | 3.6    | --      | --   |
| Sapling & seedling                  | 3.6            | --                                      | 1.3     | 1.2    | 1.1     | --   |
| All stands                          | 68.1           | --                                      | 22.0    | 28.7   | 17.4    | --   |
| Willow                              |                |   |         |        |         |      |
| Sawtimber                           | 1.0            | 1.0                                     | --      | --     | --      | --   |
| Poletimber                          | 0.8            | --                                      | 0.8     | --     | --      | --   |
| Sapling & seedling                  | 2.4            | --                                      | 1.2     | --     | 1.2     | --   |
| All stands                          | 4.2            | 1.0                                     | 2.0     | --     | 1.2     | --   |
| Lowland plains hardwoods            |                |   |         |        |         |      |
| Sawtimber                           | 170.7          | --                                      | 64.9    | 92.3   | 13.5    | --   |
| Poletimber                          | 46.7           | --                                      | 21.7    | 25.0   | --      | --   |
| Sapling & seedling                  | 48.5           | 1.3                                     | 25.7    | 21.5   | --      | --   |
| All stands                          | 265.9          | 1.3                                     | 112.3   | 138.8  | 13.5    | --   |
| Upland elm-ash-locust               |                |   |         |        |         |      |
| Sawtimber                           | 16.8           | --                                      | 11.3    | 4.5    | 1.0     | --   |
| Poletimber                          | 13.8           | --                                      | 9.1     | 4.7    | --      | --   |
| Sapling & seedling                  | 79.7           | 1.4                                     | 51.5    | 25.4   | 1.4     | --   |
| All stands                          | 110.3          | 1.4                                     | 71.9    | 34.6   | 2.4     | --   |
| Nonstocked                          | 45.4           | 45.4                                    | --      | --     | --      | --   |
| All types                           |                |   |         |        |         |      |
| Sawtimber                           | 565.0          | 2.6                                     | 218.7   | 281.7  | 62.0    | --   |
| Poletimber                          | 234.4          | --                                      | 95.1    | 123.0  | 16.3    | --   |
| Sapling & seedling                  | 363.1          | 2.7                                     | 204.2   | 139.5  | 16.7    | --   |
| Nonstocked                          | 45.4           | 45.4                                    | --      | --     | --      | --   |
| All stands                          | 1,207.9        | 50.7                                    | 518.0   | 544.2  | 95.0    | --   |

Table 16.--Area of commercial forest land by forest type, site-index class, and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| ALL UNITS                 |             |                         |       |       |       |       |       |       |      |
|---------------------------|-------------|-------------------------|-------|-------|-------|-------|-------|-------|------|
| Forest type               | All classes | Site-index class (feet) |       |       |       |       |       |       |      |
|                           |             | 21-30                   | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91+  |
| Eastern redcedar-hardwood | 27.5        | 1.9                     | 10.0  | 6.0   | 4.9   | 4.7   | --    | --    | --   |
| Oak-hickory               | 316.6       | --                      | 20.4  | 58.6  | 109.4 | 63.1  | 45.5  | 12.9  | 6.7  |
| Post-blackjack oak        | 30.9        | --                      | 8.3   | 11.9  | 8.3   | 1.2   | 1.2   | --    | --   |
| Upland plains hardwoods   | 49.4        | --                      | 1.2   | 2.2   | 19.0  | 11.6  | 8.4   | 5.8   | 1.2  |
| Elm-ash-cottonwood        | 289.6       | --                      | 3.5   | 22.1  | 60.4  | 90.2  | 67.1  | 36.4  | 9.9  |
| Cottonwood                | 68.1        | --                      | --    | 9.3   | 13.8  | 25.0  | 15.1  | 3.7   | 1.2  |
| Willow                    | 4.2         | --                      | --    | 1.2   | --    | 1.0   | 2.0   | --    | --   |
| Lowland plains hardwoods  | 265.9       | --                      | 7.6   | 12.4  | 40.4  | 94.8  | 70.8  | 35.7  | 4.2  |
| Upland elm-ash-locust     | 110.3       | --                      | 8.2   | 28.9  | 37.5  | 20.7  | 12.9  | 2.1   | --   |
| Nonstocked                | 45.4        | --                      | 3.9   | 11.3  | 9.8   | 14.3  | 3.6   | 2.5   | --   |
| All types                 | 1,207.9     | 1.9                     | 63.1  | 163.9 | 303.5 | 326.6 | 226.6 | 99.1  | 23.2 |
| NORTHEASTERN UNIT         |             |                         |       |       |       |       |       |       |      |
| Eastern redcedar-hardwood | 15.9        | 1.9                     | 7.2   | 3.1   | 2.7   | 1.0   | --    | --    | --   |
| Oak-hickory               | 182.7       | --                      | 7.0   | 41.2  | 63.0  | 30.8  | 29.0  | 7.9   | 3.8  |
| Post-blackjack oak        | 1.2         | --                      | 1.2   | --    | --    | --    | --    | --    | --   |
| Upland plains hardwoods   | 25.8        | --                      | --    | 0.6   | 14.1  | 4.6   | 5.0   | 2.5   | --   |
| Elm-ash-cottonwood        | 110.9       | --                      | 3.5   | 18.4  | 23.5  | 18.4  | 28.7  | 15.6  | 2.8  |
| Cottonwood                | 14.6        | --                      | --    | 1.2   | 2.2   | 3.9   | 2.4   | 3.7   | 1.2  |
| Willow                    | 4.2         | --                      | --    | 1.2   | --    | 1.0   | 2.0   | --    | --   |
| Lowland plains hardwoods  | 130.4       | --                      | 4.1   | 5.8   | 23.2  | 39.3  | 39.0  | 17.0  | 2.0  |
| Upland elm-ash-locust     | 82.1        | --                      | 7.0   | 26.0  | 23.2  | 13.4  | 10.4  | 2.1   | --   |
| Nonstocked                | 19.3        | --                      | 2.4   | 8.8   | 2.0   | 4.6   | 1.5   | --    | --   |
| All types                 | 588.1       | 1.9                     | 32.4  | 106.3 | 153.9 | 117.0 | 118.0 | 48.8  | 9.8  |
| SOUTHEASTERN UNIT         |             |                         |       |       |       |       |       |       |      |
| Eastern redcedar-hardwood | 11.6        | --                      | 2.8   | 2.9   | 2.2   | 3.7   | --    | --    | --   |
| Oak-hickory               | 126.1       | --                      | 13.4  | 17.4  | 42.5  | 28.4  | 16.5  | 5.0   | 2.9  |
| Post-blackjack oak        | 29.7        | --                      | 7.1   | 11.9  | 8.3   | 1.2   | 1.2   | --    | --   |
| Upland plains hardwoods   | 22.6        | --                      | 1.2   | 1.6   | 4.9   | 7.0   | 3.4   | 3.3   | 1.2  |
| Elm-ash-cottonwood        | 107.5       | --                      | --    | 3.7   | 19.4  | 40.3  | 21.5  | 15.5  | 7.1  |
| Cottonwood                | 4.9         | --                      | --    | 1.3   | --    | 2.6   | 1.0   | --    | --   |
| Willow                    | --          | --                      | --    | --    | --    | --    | --    | --    | --   |
| Lowland plains hardwoods  | 94.7        | --                      | --    | 3.9   | 10.7  | 43.1  | 21.4  | 13.4  | 2.2  |
| Upland elm-ash-locust     | 24.3        | --                      | 1.2   | 2.9   | 10.4  | 7.3   | 2.5   | --    | --   |
| Nonstocked                | 15.6        | --                      | 1.5   | 2.5   | 4.1   | 5.0   | --    | 2.5   | --   |
| All types                 | 437.0       | --                      | 27.2  | 48.1  | 102.5 | 138.6 | 67.5  | 39.7  | 13.4 |
| WESTERN UNIT              |             |                         |       |       |       |       |       |       |      |
| Eastern redcedar-hardwood | --          | --                      | --    | --    | --    | --    | --    | --    | --   |
| Oak-hickory               | 7.8         | --                      | --    | --    | 3.9   | 3.9   | --    | --    | --   |
| Post-blackjack oak        | --          | --                      | --    | --    | --    | --    | --    | --    | --   |
| Upland plains hardwoods   | --          | --                      | --    | --    | --    | --    | --    | --    | --   |
| Elm-ash-cottonwood        | 71.2        | --                      | --    | --    | 17.5  | 31.5  | 16.9  | 5.3   | --   |
| Cottonwood                | 48.6        | --                      | --    | 6.8   | 11.6  | 18.5  | 11.7  | --    | --   |
| Willow                    | --          | --                      | --    | --    | --    | --    | --    | --    | --   |
| Lowland plains hardwoods  | 40.8        | --                      | 3.5   | 2.7   | 6.5   | 12.4  | 10.4  | 5.3   | --   |
| Upland elm-ash-locust     | 3.9         | --                      | --    | --    | 3.9   | --    | --    | --    | --   |
| Nonstocked                | 10.5        | --                      | --    | --    | 3.7   | 4.7   | 2.1   | --    | --   |
| All types                 | 182.8       | --                      | 3.5   | 9.5   | 47.1  | 71.0  | 41.1  | 10.6  | --   |

Table 17.--Area of commercial forest land by forest type and basal-area class, Kansas, 1981

(In thousand acres)

| Forest type               | All<br>classes | Basal-area class (square feet per acre) |       |       |       |        |         |         |         |         |      |  |
|---------------------------|----------------|---|-------|-------|-------|--------|---------|---------|---------|---------|------|--|
|                           |                | 0-20                                    | 21-40 | 41-60 | 61-80 | 81-100 | 101-120 | 121-140 | 141-160 | 161-180 | 181+ |  |
| Eastern redcedar-hardwood | 27.5           | 6.5                                     | 8.1   | 7.5   | 2.8   | --     | 2.6     | --      | --      | --      | --   |  |
| Oak-hickory               | 316.6          | 13.9                                    | 42.4  | 83.5  | 78.3  | 60.6   | 30.6    | 4.6     | 2.7     | --      | --   |  |
| Post-blackjack oak        | 30.9           | --                                      | 2.4   | 3.7   | 10.8  | 9.3    | 3.6     | 1.1     | --      | --      | --   |  |
| Upland plains hardwoods   | 49.4           | --                                      | 6.4   | 16.2  | 12.0  | 11.2   | 2.5     | 1.1     | --      | --      | --   |  |
| Elm-ash-cottonwood        | 289.6          | 11.5                                    | 49.7  | 88.9  | 56.8  | 31.0   | 34.3    | 8.5     | 3.0     | 5.9     | --   |  |
| Cottonwood                | 68.1           | 1.8                                     | 4.7   | 16.6  | 10.0  | 10.0   | 9.2     | 5.7     | 6.0     | --      | 4.1  |  |
| Willow                    | 4.2            | 1.2                                     | 0.8   | 1.2   | --    | --     | 1.0     | --      | --      | --      | --   |  |
| Lowland plains hardwoods  | 265.9          | 3.5                                     | 36.6  | 63.3  | 65.1  | 47.3   | 40.5    | 9.6     | --      | --      | --   |  |
| Upland elm-ash-locust     | 110.3          | 27.6                                    | 29.3  | 24.2  | 19.6  | 8.4    | 1.2     | --      | --      | --      | --   |  |
| Nonstocked                | 45.4           | 19.9                                    | 9.8   | 14.7  | 1.0   | --     | --      | --      | --      | --      | --   |  |
| All types                 | 1,207.9        | 85.9                                    | 190.2 | 319.8 | 256.4 | 177.8  | 125.5   | 30.6    | 11.7    | 5.9     | 4.1  |  |

Table 18.--Area of commercial forest land by forest type and distance to road<sup>1/</sup>, Kansas, 1981

(In thousand acres)

| Forest type               | All distances | Distance to road (miles) |         |       |      |       |      |       |     |
|---------------------------|---------------|--------------------------|---------|-------|------|-------|------|-------|-----|
|                           |               | 0-1/8                    | 1/8-1/4 | 1/4-1 | 1-2  | 1/2-5 | 5-10 | 10-20 | 20+ |
| Eastern redcedar-hardwood | 27.5          | 2.8                      | 7.4     | 15.7  | 1.6  | --    | --   | --    | --  |
| Oak-hickory               | 316.6         | 60.0                     | 81.3    | 169.5 | 2.5  | 3.3   | --   | --    | --  |
| Post-blackjack oak        | 30.9          | 4.8                      | 8.5     | 15.2  | --   | 2.4   | --   | --    | --  |
| Upland plains hardwoods   | 49.4          | 15.8                     | 11.4    | 17.8  | --   | 4.4   | --   | --    | --  |
| Elm-ash-cottonwood        | 289.6         | 62.2                     | 90.5    | 124.8 | 2.3  | 3.5   | 6.3  | --    | --  |
| Cottonwood                | 68.1          | 7.1                      | 24.6    | 33.0  | 3.4  | --    | --   | --    | --  |
| Willow                    | 4.2           | --                       | 3.0     | 1.2   | --   | --    | --   | --    | --  |
| Lowland plains hardwoods  | 265.9         | 50.4                     | 90.0    | 117.5 | 7.0  | --    | 1.0  | --    | --  |
| Upland elm-ash-locust     | 110.3         | 28.2                     | 34.0    | 42.1  | 2.5  | 2.5   | 1.0  | --    | --  |
| Nonstocked                | 45.4          | 8.9                      | 13.1    | 23.4  | --   | --    | --   | --    | --  |
| All types                 | 1,207.9       | 240.2                    | 363.8   | 560.2 | 19.3 | 16.1  | 8.3  | --    | --  |

<sup>1/</sup> A permanent road that is maintained at least once a year.

Table 19.--Area of commercial forest land by forest type and distance to water<sup>1/</sup>, Kansas, 1981  
(In thousand acres)

| Forest type               | Distance to water (miles) |       |         |       |       |       |       |         |       |       |       |
|---------------------------|---------------------------|-------|---------|-------|-------|-------|-------|---------|-------|-------|-------|
|                           | All                       | 0-1/8 | 1/8-1/4 | 1/4-1 | 1-2   | 1/2   | 2     | 1 1/2-5 | 5-10  | 10-20 | 20+   |
| Distances                 |                           |       |         |       |       |       |       |         |       |       |       |
| Eastern redcedar-hardwood | 27.5                      | 2.8   | 2.5     | 4.9   | 7.8   | 7.3   | 1.4   | 1.4     | --    | --    | 8.1   |
| Oak-hickory               | 316.6                     | 28.5  | 20.5    | 74.4  | 74.0  | 41.6  | 41.6  | 20.2    | 20.2  | 22.3  | 35.1  |
| Post-blackjack oak        | 30.9                      | 1.2   | 4.6     | 4.7   | 8.4   | 4.7   | 4.7   | 2.4     | 2.4   | 3.7   | 1.2   |
| Upland plains hardwoods   | 49.4                      | 2.3   | 3.6     | 6.1   | 6.0   | 9.6   | 9.6   | 8.8     | 8.8   | 6.5   | 6.5   |
| Elm-ash-cottonwood        | 289.6                     | 56.2  | 20.1    | 35.9  | 42.8  | 27.1  | 27.1  | 31.2    | 31.2  | 28.5  | 47.8  |
| Cottonwood                | 68.1                      | 19.1  | 8.0     | 9.6   | 3.6   | 2.9   | 2.9   | 5.3     | 5.3   | 6.9   | 12.7  |
| Willow                    | 4.2                       | 1.0   | --      | 1.2   | 0.8   | 1.2   | 1.2   | --      | --    | --    | --    |
| Lowland plains hardwoods  | 265.9                     | 44.9  | 11.9    | 36.3  | 37.2  | 47.4  | 47.4  | 31.2    | 31.2  | 31.1  | 25.9  |
| Upland elm-ash-locust     | 110.3                     | 9.9   | 8.6     | 22.1  | 26.6  | 23.6  | 23.6  | 4.4     | 4.4   | 3.6   | 11.5  |
| Nonstocked                | 45.4                      | 3.5   | 1.2     | 6.0   | 4.4   | 8.1   | 8.1   | 3.1     | 3.1   | 8.9   | 10.2  |
| All types                 | 1,207.9                   | 169.4 | 81.0    | 201.2 | 211.6 | 167.6 | 167.6 | 106.6   | 106.6 | 111.5 | 159.0 |

<sup>1/</sup>Lakes or ponds 5 acres or larger in area, and streams or rivers at least 66 feet in width.

Table 20.--Area of commercial forest land by forest type and stand-area class, Kansas, 1981  
(In thousand acres)

| Forest type               | Stand-area class (acres) |       |       |       |       |       |        |         |         |      |  |  |  |
|---------------------------|--------------------------|-------|-------|-------|-------|-------|--------|---------|---------|------|--|--|--|
|                           | All                      | 1-4   | 5-9   | 10-19 | 20-39 | 40-79 | 80-159 | 160-319 | 320-639 | 640+ |  |  |  |
| Classes                   |                          |       |       |       |       |       |        |         |         |      |  |  |  |
| Eastern redcedar-hardwood | 27.5                     | 3.5   | 10.2  | 5.8   | 3.6   | --    | 4.4    | --      | --      | --   |  |  |  |
| Oak-hickory               | 316.6                    | 33.1  | 67.7  | 94.7  | 43.6  | 40.8  | 17.2   | 8.3     | 9.3     | 1.9  |  |  |  |
| Post-blackjack oak        | 30.9                     | 1.2   | 4.9   | 7.0   | 7.2   | 3.7   | 3.5    | 3.4     | --      | --   |  |  |  |
| Upland plains hardwoods   | 49.4                     | 6.8   | 7.3   | 21.2  | 10.2  | 2.7   | 0      | 1.2     | --      | --   |  |  |  |
| Elm-ash-cottonwood        | 289.6                    | 74.1  | 83.6  | 66.7  | 34.9  | 13.7  | 8.7    | 5.5     | 1.1     | 1.3  |  |  |  |
| Cottonwood                | 68.1                     | 24.5  | 10.6  | 11.2  | 12.2  | 3.3   | 1.1    | 3.9     | --      | 1.3  |  |  |  |
| Willow                    | 4.2                      | 0.8   | 1.2   | 1.2   | 1.0   | --    | --     | --      | --      | --   |  |  |  |
| Lowland plains hardwoods  | 265.9                    | 57.4  | 72.7  | 74.5  | 33.0  | 17.7  | 10.6   | --      | --      | --   |  |  |  |
| Upland elm-ash-locust     | 110.3                    | 27.6  | 30.5  | 19.8  | 16.8  | 9.6   | 6.0    | --      | --      | --   |  |  |  |
| Nonstocked                | 45.4                     | 14.8  | 15.5  | 7.6   | --    | 1.2   | 1.2    | 5.1     | --      | --   |  |  |  |
| All types                 | 1,207.9                  | 243.8 | 304.2 | 309.7 | 162.5 | 92.7  | 52.7   | 27.4    | 10.4    | 4.5  |  |  |  |



Table 21.--Area of commercial forest land by stocking class based on  
selected stand components, Kansas, 1981

(In thousand acres)

| Stocking<br>percentage | All<br>live<br>trees | Stocking classified in terms of |                    |                     |                           |
|------------------------|----------------------|---------------------------------|--------------------|---------------------|---------------------------|
|                        |                      | Growing-stock<br>trees          | Desirable<br>trees | Acceptable<br>trees | Rough and<br>rotten trees |
| 0-10                   | 2.7                  | 19.5                            | 1,163.2            | 19.5                | 175.3                     |
| 11-20                  | 2.5                  | 43.9                            | 36.2               | 46.1                | 271.3                     |
| 21-30                  | 12.4                 | 71.8                            | 5.0                | 79.9                | 281.0                     |
| 31-40                  | 22.1                 | 143.6                           | 2.2                | 148.4               | 217.7                     |
| 41-50                  | 51.5                 | 134.9                           | --                 | 144.3               | 133.5                     |
| 51-60                  | 81.8                 | 155.1                           | 1.3                | 155.6               | 61.8                      |
| 61-70                  | 95.6                 | 166.7                           | --                 | 176.1               | 43.7                      |
| 71-80                  | 119.0                | 155.0                           | --                 | 150.2               | 20.3                      |
| 81-90                  | 176.5                | 129.9                           | --                 | 124.2               | 2.1                       |
| 91-100                 | 187.4                | 91.5                            | --                 | 87.5                | 1.2                       |
| 101-110                | 154.8                | 52.5                            | --                 | 38.6                | --                        |
| 111-120                | 149.3                | 25.8                            | --                 | 23.1                | --                        |
| 121-130                | 82.4                 | 16.7                            | --                 | 14.4                | --                        |
| 131-140                | 48.6                 | --                              | --                 | --                  | --                        |
| 141-150                | 19.5                 | --                              | --                 | --                  | --                        |
| 151-160                | 1.8                  | --                              | --                 | --                  | --                        |
| 161+                   | --                   | --                              | --                 | --                  | --                        |
| Total                  | 1,207.9              | 1,207.9                         | 1,207.9            | 1,207.9             | 1,207.9                   |

Table 22.--Area of commercial forest land by forest type, physiographic class, and ownership class, Kansas, 1981

(In thousand acres)

| Forest type and<br>physiographic class | All<br>classes | Ownership class    |                  |        |       |                         |        | Misc.<br>private |
|--|----------------|--------------------|------------------|--------|-------|-------------------------|--------|------------------|
|  |                | National<br>Forest | Misc.<br>federal | Indian | State | County and<br>municipal | Farmer |                  |
| Eastern redcedar-hardwood              |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Mesic                                  | 2.4            | --                 | --               | --     | --    | --                      | 2.4    | --               |
| Xeromesic                              | 25.1           | --                 | 1.6              | --     | --    | --                      | 16.3   | 7.2              |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All classes                            | 27.5           | --                 | 1.6              | --     | --    | --                      | 18.7   | 7.2              |
| Oak-hickory                            |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | 2.6            | --                 | --               | --     | --    | --                      | 2.6    | --               |
| Hydromesic                             | 7.6            | --                 | --               | --     | --    | --                      | 4.2    | 3.4              |
| Mesic                                  | 132.7          | --                 | 0.9              | 1.2    | 2.6   | --                      | 76.7   | 51.3             |
| Xeromesic                              | 155.5          | --                 | 5.9              | --     | --    | --                      | 88.5   | 61.1             |
| Xeric                                  | 18.2           | --                 | --               | --     | --    | --                      | 12.4   | 5.8              |
| All classes                            | 316.6          | --                 | 6.8              | 1.2    | 2.6   | --                      | 184.4  | 121.6            |
| Post-blackjack oak                     |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | 1.2            | --                 | --               | --     | --    | --                      | 1.2    | --               |
| Mesic                                  | 9.8            | --                 | --               | --     | --    | --                      | 8.5    | 1.3              |
| Xeromesic                              | 17.6           | --                 | 1.2              | --     | --    | --                      | 11.7   | 4.7              |
| Xeric                                  | 2.3            | --                 | --               | --     | --    | --                      | 1.1    | 1.2              |
| All classes                            | 30.9           | --                 | 1.2              | --     | --    | --                      | 22.5   | 7.2              |
| Upland plains hardwoods                |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Mesic                                  | 1.2            | --                 | --               | --     | --    | --                      | 1.2    | --               |
| Xeromesic                              | 46.5           | --                 | 2.5              | --     | --    | 1.1                     | 23.9   | 19.0             |
| Xeric                                  | 1.7            | --                 | --               | --     | --    | --                      | 1.7    | --               |
| All classes                            | 49.4           | --                 | 2.5              | --     | --    | 1.1                     | 26.8   | 19.0             |
| Elm-ash-cottonwood                     |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | 9.0            | --                 | --               | --     | --    | --                      | 2.3    | 6.7              |
| Hydromesic                             | 77.1           | --                 | 3.3              | --     | 1.0   | --                      | 49.6   | 23.2             |
| Mesic                                  | 203.5          | --                 | 5.3              | 1.5    | --    | 1.2                     | 130.3  | 65.1             |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All classes                            | 289.6          | --                 | 8.6              | 1.5    | 1.0   | 1.2                     | 182.2  | 95.0             |
| Cottonwood                             |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | 3.9            | --                 | --               | --     | --    | --                      | --     | 3.9              |
| Hydromesic                             | 20.2           | --                 | 3.0              | --     | 2.5   | --                      | 6.9    | 7.8              |
| Mesic                                  | 29.9           | --                 | --               | --     | --    | --                      | 16.3   | 13.6             |
| Xeromesic                              | 6.9            | --                 | --               | --     | --    | --                      | 4.8    | 2.1              |
| Xeric                                  | 7.2            | --                 | --               | --     | --    | --                      | 7.2    | --               |
| All classes                            | 68.1           | --                 | 3.0              | --     | 2.5   | --                      | 35.2   | 27.4             |

(Table 22 continued on next page)

(Table 22 continued)

| Forest type and<br>physiographic class | Ownership class |                    |                  |        |       |                         |                            |
|--|-----------------|--------------------|------------------|--------|-------|-------------------------|----------------------------|
|  | All<br>classes  | National<br>Forest | Misc.<br>federal | Indian | State | County and<br>municipal | Farmer<br>Misc.<br>private |
| Willow                                 |                 |                    |                  |        |       |                         |                            |
| Hydric                                 | --              | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | 3.4             | --                 | --               | --     | --    | --                      | 1.0 2.4                    |
| Mesic                                  | --              | --                 | --               | --     | --    | --                      | --                         |
| Xeromesic                              | 0.8             | --                 | --               | --     | --    | --                      | 0.8                        |
| Xeric                                  | --              | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 4.2             | --                 | --               | --     | --    | --                      | 1.0 3.2                    |
| Lowland plains hardwoods               |                 |                    |                  |        |       |                         |                            |
| Hydric                                 | 2.5             | --                 | --               | --     | --    | --                      | 2.5 --                     |
| Hydromesic                             | 52.3            | --                 | 2.7              | --     | --    | --                      | 31.6 18.0                  |
| Mesic                                  | 211.1           | --                 | 4.4              | --     | --    | --                      | 152.5 54.2                 |
| Xeromesic                              | --              | --                 | --               | --     | --    | --                      | --                         |
| Xeric                                  | --              | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 265.9           | --                 | 7.1              | --     | --    | --                      | 186.6 72.2                 |
| Upland elm-ash-locust                  |                 |                    |                  |        |       |                         |                            |
| Hydric                                 | --              | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | --              | --                 | --               | --     | --    | --                      | --                         |
| Mesic                                  | --              | --                 | --               | --     | --    | --                      | --                         |
| Xeromesic                              | 100.5           | --                 | 5.8              | 1.2    | --    | --                      | 54.7 38.8                  |
| Xeric                                  | 9.8             | --                 | --               | --     | --    | --                      | 8.8 1.0                    |
| All classes                            | 110.3           | --                 | 5.8              | 1.2    | --    | --                      | 63.5 39.8                  |
| Nonstocked                             |                 |                    |                  |        |       |                         |                            |
| Hydric                                 | 9.1             | --                 | --               | --     | 1.4   | --                      | -- 7.7                     |
| Hydromesic                             | 3.0             | --                 | --               | --     | --    | --                      | 3.0 --                     |
| Mesic                                  | 11.5            | --                 | --               | --     | --    | --                      | 7.7 3.8                    |
| Xeromesic                              | 19.7            | --                 | --               | --     | --    | --                      | 15.8 3.9                   |
| Xeric                                  | 2.1             | --                 | --               | --     | --    | --                      | 2.1 --                     |
| All classes                            | 45.4            | --                 | --               | --     | 1.4   | --                      | 28.6 15.4                  |
| All types                              |                 |                    |                  |        |       |                         |                            |
| Hydric                                 | 27.1            | --                 | --               | --     | 1.4   | --                      | 7.4 18.3                   |
| Hydromesic                             | 164.8           | --                 | 9.0              | --     | 3.5   | --                      | 97.5 54.8                  |
| Mesic                                  | 602.1           | --                 | 10.6             | 2.8    | 2.6   | 1.2                     | 395.6 189.3                |
| Xeromesic                              | 372.6           | --                 | 17.0             | 1.2    | --    | 1.1                     | 215.7 137.6                |
| Xeric                                  | 41.3            | --                 | --               | --     | --    | --                      | 33.3 8.0                   |
| All classes                            | 1,207.9         | --                 | 36.6             | 4.0    | 7.5   | 2.3                     | 749.5 408.0                |

Table 23.--Area of noncommercial forest land by ownership class,  
Kansas, 1981

(In thousand acres)

| Ownership class       | Total | Unproductive | Productive-<br>reserved |
|-----------------------|-------|--------------|-------------------------|
| National Forest       | --    | --           | --                      |
| Miscellaneous federal | 13.8  | --           | 13.8                    |
| Indian                | --    | --           | --                      |
| State                 | 2.8   | --           | 2.8                     |
| County and municipal  | 4.8   | --           | 4.8                     |
| Farmer                | 89.1  | 89.1         | --                      |
| Miscellaneous private | 40.3  | 39.3         | 1.0                     |
| All owners            | 150.8 | 128.4        | 22.4                    |

Table 24.--Area of noncommercial forest land by forest type and  
Forest Survey Unit, Kansas, 1981

(In thousand acres)

| ALL UNITS                 |       |              |                         |
|---------------------------|-------|--------------|-------------------------|
| Forest type               | Total | Unproductive | Productive-<br>reserved |
| Eastern redcedar-hardwood | 24.6  | 17.1         | 7.5                     |
| Oak-hickory               | 23.1  | 13.2         | 9.9                     |
| Post-blackjack oak        | 76.0  | 76.0         | --                      |
| Upland plains hardwoods   | 8.8   | 8.8          | --                      |
| Elm-ash-cottonwood        | 7.8   | 5.3          | 2.5                     |
| Cottonwood                | 2.5   | --           | 2.5                     |
| Willow                    | --    | --           | --                      |
| Lowland plains hardwoods  | 1.0   | 1.0          | --                      |
| Upland elm-ash-locust     | 5.0   | 6.0          | --                      |
| Nonstocked                | 1.0   | 1.0          | --                      |
| All types                 | 150.8 | 128.4        | 22.4                    |
| NORTHEASTERN UNIT         |       |              |                         |
| Eastern redcedar-hardwood | 19.0  | 11.5         | 7.5                     |
| Oak-hickory               | 7.6   | --           | 7.6                     |
| Post-blackjack oak        | 2.4   | 2.4          | --                      |
| Upland plains hardwoods   | 2.3   | 2.3          | --                      |
| Elm-ash-cottonwood        | --    | --           | --                      |
| Cottonwood                | --    | --           | --                      |
| Willow                    | --    | --           | --                      |
| Lowland plains hardwoods  | --    | --           | --                      |
| Upland elm-ash-locust     | 3.8   | 3.8          | --                      |
| Nonstocked                | 1.0   | 1.0          | --                      |
| All types                 | 36.1  | 21.0         | 15.1                    |
| SOUTHEASTERN UNIT         |       |              |                         |
| Eastern redcedar-hardwood | 2.4   | 2.4          | --                      |
| Oak-hickory               | 12.0  | 9.7          | 2.3                     |
| Post-blackjack oak        | 73.6  | 73.6         | --                      |
| Upland plains hardwoods   | 6.5   | 6.5          | --                      |
| Elm-ash-cottonwood        | 1.6   | 1.6          | --                      |
| Cottonwood                | --    | --           | --                      |
| Willow                    | --    | --           | --                      |
| Lowland plains hardwoods  | 1.0   | 1.0          | --                      |
| Upland elm-ash-locust     | 2.2   | 2.2          | --                      |
| Nonstocked                | --    | --           | --                      |
| All types                 | 99.3  | 97.0         | 2.3                     |
| WESTERN UNIT              |       |              |                         |
| Eastern redcedar-hardwood | 3.2   | 3.2          | --                      |
| Oak-hickory               | 3.5   | 3.5          | --                      |
| Post-blackjack oak        | --    | --           | --                      |
| Upland plains hardwoods   | --    | --           | --                      |
| Elm-ash-cottonwood        | 6.2   | 3.7          | 2.5                     |
| Cottonwood                | 2.5   | --           | 2.5                     |
| Willow                    | --    | --           | --                      |
| Lowland plains hardwoods  | --    | --           | --                      |
| Upland elm-ash-locust     | --    | --           | --                      |
| Nonstocked                | --    | --           | --                      |
| All types                 | 15.4  | 10.4         | 5.0                     |

Table 25.--Area of nonforest land with trees by land use, forest type, and Forest Survey Unit, Kansas, 1981  
(In thousand acres)

| Land use          | ALL UNITS   |                           |             |                    |                         |                    |            |        |                          |                       |             |
|-------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                   | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|                   | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| Cropland          | 63.0        | --                        | 4.1         | 2.7                | 1.3                     | 27.4               | 1.6        | --     | 10.0                     | 7.3                   | 8.6         |
| Improved pasture  | 533.5       | 26.4                      | 24.4        | 11.7               | 11.7                    | 122.4              | 13.5       | --     | 15.1                     | 190.0                 | 113.4       |
| Wooded strips     | 150.0       | 5.3                       | 4.8         | --                 | 5.4                     | 51.6               | 5.1        | 2.0    | 49.9                     | 5.6                   | 19.3        |
| Idle farmland     | 23.9        | --                        | --          | --                 | --                      | 18.0               | --         | --     | 1.3                      | 1.4                   | 3.2         |
| Marsh             | 22.7        | --                        | --          | --                 | --                      | 8.6                | 1.1        | 1.4    | 0.9                      | --                    | 10.7        |
| Windbreaks        | 186.3       | 9.3                       | 1.4         | --                 | 4.3                     | 48.9               | 3.2        | --     | 1.4                      | 117.3                 | --          |
| Wooded pasture    | 249.3       | 13.3                      | 12.7        | --                 | 11.1                    | 55.4               | 8.9        | --     | 10.0                     | 14.5                  | 83.9        |
| All uses          | 1,189.3     | 54.8                      | 47.4        | 14.4               | 34.8                    | 332.3              | 33.4       | 3.4    | 88.6                     | 336.1                 | 244.1       |
| NORTHEASTERN UNIT |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Cropland          | 30.2        | --                        | 4.1         | --                 | --                      | 6.2                | 1.6        | --     | 7.0                      | 5.9                   | 5.4         |
| Improved pasture  | 139.4       | 9.9                       | 14.8        | --                 | 5.4                     | 29.4               | --         | --     | 3.8                      | 51.7                  | 24.4        |
| Wooded strips     | 62.6        | 1.9                       | 1.2         | --                 | 3.9                     | 22.3               | --         | 1.0    | 21.4                     | 2.9                   | 8.0         |
| Idle farmland     | 4.1         | --                        | --          | --                 | --                      | 2.7                | --         | --     | --                       | 1.4                   | --          |
| Marsh             | 4.2         | --                        | --          | --                 | --                      | 0.8                | 1.1        | 1.4    | 0.9                      | --                    | --          |
| Windbreaks        | 43.0        | 2.9                       | 1.4         | --                 | 3.0                     | 6.1                | --         | --     | 1.4                      | 28.2                  | --          |
| Wooded pasture    | 60.5        | 3.4                       | 6.3         | --                 | 2.3                     | 13.8               | --         | --     | 3.0                      | 4.5                   | 27.2        |
| All uses          | 344.0       | 18.1                      | 27.8        | --                 | 14.6                    | 81.3               | 2.7        | 2.4    | 37.5                     | 94.6                  | 65.0        |
| SOUTHEASTERN UNIT |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Cropland          | 13.6        | --                        | --          | 2.7                | 1.3                     | 5.2                | --         | --     | 3.0                      | 1.4                   | --          |
| Improved pasture  | 225.2       | 7.3                       | 9.6         | 11.7               | 6.3                     | 37.3               | 1.4        | --     | 8.1                      | 112.1                 | 31.4        |
| Wooded strips     | 50.3        | --                        | 3.6         | --                 | 2.5                     | 13.6               | --         | 1.0    | 18.9                     | 2.7                   | 8.0         |
| Idle farmland     | 2.5         | --                        | --          | --                 | --                      | 1.2                | --         | --     | 1.3                      | --                    | --          |
| Marsh             | 4.3         | --                        | --          | --                 | --                      | 4.3                | --         | --     | --                       | --                    | --          |
| Windbreaks        | 66.9        | --                        | --          | --                 | 1.3                     | 5.9                | --         | --     | --                       | 59.7                  | --          |
| Wooded pasture    | 95.2        | 6.7                       | 6.4         | --                 | 6.2                     | 20.1               | --         | --     | 7.0                      | 10.0                  | 38.8        |
| All uses          | 438.0       | 14.0                      | 19.6        | 14.4               | 17.6                    | 87.6               | 1.4        | 1.0    | 38.3                     | 185.9                 | 78.2        |
| WESTERN UNIT      |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Cropland          | 19.2        | --                        | --          | --                 | --                      | 16.0               | --         | --     | --                       | --                    | 3.2         |
| Improved pasture  | 169.0       | 9.2                       | --          | --                 | --                      | 55.7               | 12.1       | --     | 3.2                      | 26.2                  | 62.6        |
| Wooded strips     | 37.1        | 3.4                       | --          | --                 | --                      | 15.7               | 5.1        | --     | 9.6                      | --                    | 3.3         |
| Idle farmland     | 17.3        | --                        | --          | --                 | --                      | 14.1               | --         | --     | --                       | --                    | 3.2         |
| Marsh             | 14.2        | --                        | --          | --                 | --                      | 3.5                | --         | --     | --                       | --                    | 10.7        |
| Windbreaks        | 76.4        | 6.9                       | --          | --                 | --                      | 36.9               | 3.2        | --     | --                       | 29.4                  | --          |
| Wooded pasture    | 54.1        | 3.2                       | --          | --                 | 2.6                     | 21.5               | 8.9        | --     | --                       | --                    | 17.9        |
| All uses          | 387.3       | 22.7                      | --          | --                 | 2.6                     | 163.4              | 29.3       | --     | 12.8                     | 55.6                  | 100.9       |

Table 26.--Area of nonforest land with trees by forest type and stand-size class, Kansas, 1981  
(In thousand acres)

| Forest type               | Stand-size class |                  |                   |                             |                  |
|---------------------------|------------------|------------------|-------------------|-----------------------------|------------------|
|                           | All stands       | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
| Eastern redcedar-hardwood | 54.8             | --               | 15.8              | 38.0                        | --               |
| Oak-hickory               | 47.4             | 14.5             | 14.7              | 18.2                        | --               |
| Post-blackjack oak        | 14.4             | 1.3              | 6.2               | 6.9                         | --               |
| Upland plains hardwoods   | 34.8             | 8.8              | 11.0              | 15.0                        | --               |
| Elm-ash-cottonwood        | 332.3            | 51.8             | 144.3             | 136.2                       | --               |
| Cottonwood                | 33.4             | 23.8             | 9.6               | --                          | --               |
| Willow                    | 3.4              | --               | 2.4               | 1.0                         | --               |
| Lowland plains hardwoods  | 88.6             | 18.7             | 40.4              | 29.5                        | --               |
| Upland elm-ash-locust     | 336.1            | 24.6             | 157.4             | 154.1                       | --               |
| Nonstocked                | 244.1            | --               | --                | --                          | 244.1            |
| All types                 | 1,189.3          | 143.5            | 402.8             | 398.9                       | 244.1            |

Table 27.--Area of windbreaks by forest type, stand-size class, and Forest Survey Unit, Kansas, 1981

(In thousand acres)

| ALL UNITS                 |            |                  |                   |                             |                  |
|---------------------------|------------|------------------|-------------------|-----------------------------|------------------|
| Forest type               | All stands | Stand-size class |                   |                             |                  |
|                           |            | Sawtimber stands | Poletimber stands | Sapling and seedling stands | Nonstocked areas |
| Eastern redcedar-hardwood | 9.8        | --               | 6.9               | 2.9                         | --               |
| Oak-hickory               | 1.4        | --               | 1.4               | --                          | --               |
| Post-blackjack oak        | --         | --               | --                | --                          | --               |
| Upland plains hardwoods   | 4.3        | 1.6              | 2.7               | --                          | --               |
| Elm-ash-cottonwood        | 48.8       | 3.3              | 39.1              | 6.4                         | --               |
| Cottonwood                | 3.2        | --               | 3.2               | --                          | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | 1.4        | --               | 1.4               | --                          | --               |
| Upland elm-ash-locust     | 117.4      | 11.4             | 87.0              | 19.0                        | --               |
| Nonstocked                | --         | --               | --                | --                          | --               |
| All types                 | 186.3      | 16.3             | 141.7             | 28.3                        | --               |
| NORTHEASTERN UNIT         |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | 2.9        | --               | --                | 2.9                         | --               |
| Oak-hickory               | 1.4        | --               | 1.4               | --                          | --               |
| Post-blackjack oak        | --         | --               | --                | --                          | --               |
| Upland plains hardwoods   | 3.0        | 1.6              | 1.4               | --                          | --               |
| Elm-ash-cottonwood        | 6.0        | --               | 4.5               | 1.5                         | --               |
| Cottonwood                | --         | --               | --                | --                          | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | 1.4        | --               | 1.4               | --                          | --               |
| Upland elm-ash-locust     | 28.3       | 2.8              | 19.8              | 5.7                         | --               |
| Nonstocked                | --         | --               | --                | --                          | --               |
| All types                 | 43.0       | 4.4              | 28.5              | 10.1                        | --               |
| SOUTHEASTERN UNIT         |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | --         | --               | --                | --                          | --               |
| Oak-hickory               | --         | --               | --                | --                          | --               |
| Post-blackjack oak        | --         | --               | --                | --                          | --               |
| Upland plains hardwoods   | 1.3        | --               | 1.3               | --                          | --               |
| Elm-ash-cottonwood        | 5.9        | --               | 4.2               | 1.7                         | --               |
| Cottonwood                | --         | --               | --                | --                          | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | --         | --               | --                | --                          | --               |
| Upland elm-ash-locust     | 59.7       | 1.3              | 48.3              | 10.1                        | --               |
| Nonstocked                | --         | --               | --                | --                          | --               |
| All types                 | 66.9       | 1.3              | 53.8              | 11.8                        | --               |
| WESTERN UNIT              |            |                  |                   |                             |                  |
| Eastern redcedar-hardwood | 6.9        | --               | 6.9               | --                          | --               |
| Oak-hickory               | --         | --               | --                | --                          | --               |
| Post-blackjack oak        | --         | --               | --                | --                          | --               |
| Upland plains hardwoods   | --         | --               | --                | --                          | --               |
| Elm-ash-cottonwood        | 36.9       | 3.3              | 30.4              | 3.2                         | --               |
| Cottonwood                | 3.2        | --               | 3.2               | --                          | --               |
| Willow                    | --         | --               | --                | --                          | --               |
| Lowland plains hardwoods  | --         | --               | --                | --                          | --               |
| Upland elm-ash-locust     | 29.4       | 7.3              | 18.9              | 3.2                         | --               |
| Nonstocked                | --         | --               | --                | --                          | --               |
| All types                 | 76.4       | 10.6             | 59.4              | 6.4                         | --               |

Table 28.--Area of wooded strips by forest type, stand-size class, and ownership class, Kansas, 1981  
(In thousand acres)

| Forest type and<br>stand-size class | All<br>classes | Ownership class    |                  |        |       |                         |        | Misc.<br>private |
|-------------------------------------|----------------|--------------------|------------------|--------|-------|-------------------------|--------|------------------|
|                                     |                | National<br>Forest | Misc.<br>federal | Indian | State | County and<br>municipal | Farmer |                  |
| Eastern redcedar-hardwood           |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Poletimber                          | 3.4            | --                 | --               | --     | --    | --                      | 3.4    | --               |
| Sapling & seedling                  | 1.9            | --                 | --               | --     | --    | --                      | 1.9    | --               |
| All stands                          | 5.3            | --                 | --               | --     | --    | --                      | 5.3    | --               |
| Oak-hickory                         |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Poletimber                          | 2.4            | --                 | --               | --     | --    | --                      | 2.4    | --               |
| Sapling & seedling                  | 2.7            | --                 | --               | --     | --    | --                      | 2.7    | --               |
| All stands                          | 5.1            | --                 | --               | --     | --    | --                      | 5.1    | --               |
| Post-blackjack oak                  |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Poletimber                          | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Sapling & seedling                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All stands                          | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Upland plains hardwoods             |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Poletimber                          | 2.8            | --                 | --               | --     | --    | --                      | 2.8    | --               |
| Sapling & seedling                  | 3.6            | --                 | --               | --     | --    | --                      | 2.0    | 1.6              |
| All stands                          | 6.4            | --                 | --               | --     | --    | --                      | 4.8    | 1.6              |
| Elm-ash-cottonwood                  |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | 4.6            | --                 | 1.3              | --     | --    | --                      | 3.3    | --               |
| Poletimber                          | 24.1           | --                 | 3.3              | --     | --    | --                      | 17.8   | 3.0              |
| Sapling & seedling                  | 23.1           | --                 | --               | --     | --    | --                      | 17.4   | 5.7              |
| All stands                          | 51.8           | --                 | 4.6              | --     | --    | --                      | 38.5   | 8.7              |
| Cottonwood                          |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | 2.5            | --                 | --               | --     | --    | --                      | 2.5    | --               |
| Poletimber                          | 2.6            | --                 | --               | --     | --    | --                      | --     | 2.6              |
| Sapling & seedling                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All stands                          | 5.1            | --                 | --               | --     | --    | --                      | 2.5    | 2.6              |
| Willow                              |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Poletimber                          | 1.0            | --                 | --               | --     | --    | --                      | 1.0    | --               |
| Sapling & seedling                  | 1.0            | --                 | --               | --     | --    | --                      | 1.0    | --               |
| All stands                          | 2.0            | --                 | --               | --     | --    | --                      | 2.0    | --               |
| Lowland plains hardwoods            |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | 6.8            | --                 | --               | --     | --    | --                      | 3.7    | 3.1              |
| Poletimber                          | 13.5           | --                 | --               | --     | --    | --                      | 12.1   | 1.4              |
| Sapling & seedling                  | 14.9           | --                 | --               | --     | --    | --                      | 13.9   | 1.0              |
| All stands                          | 35.2           | --                 | --               | --     | --    | --                      | 29.7   | 5.5              |
| Upland elm-ash-locust               |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | 1.4            | --                 | --               | --     | --    | --                      | --     | 1.4              |
| Poletimber                          | 8.1            | --                 | --               | --     | --    | --                      | 6.6    | 1.5              |
| Sapling & seedling                  | 10.4           | --                 | 1.2              | --     | --    | --                      | 4.0    | 5.2              |
| All stands                          | 19.9           | --                 | 1.2              | --     | --    | --                      | 10.6   | 8.1              |
| Nonstocked                          | 19.2           | --                 | --               | --     | --    | --                      | 16.1   | 3.1              |
| All types                           |                |                    |                  |        |       |                         |        |                  |
| Sawtimber                           | 15.3           | --                 | 1.3              | --     | --    | --                      | 9.5    | 4.5              |
| Poletimber                          | 57.9           | --                 | 3.3              | --     | --    | --                      | 46.1   | 8.5              |
| Sapling & seedling                  | 57.6           | --                 | 1.2              | --     | --    | --                      | 42.9   | 13.5             |
| Nonstocked                          | 19.2           | --                 | --               | --     | --    | --                      | 16.1   | 3.1              |
| All stands                          | 150.0          | --                 | 5.8              | --     | --    | --                      | 114.6  | 29.6             |



Table 29.---Area of wooded strips by forest type and site-index class, Kansas, 1981  
(In thousand acres)

| Forest type               | All<br>classes | Site-index class (feet) |       |       |       |       |       |       |     |    |    |
|---------------------------|----------------|-------------------------|-------|-------|-------|-------|-------|-------|-----|----|----|
|                           |                | 21-30                   | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91+ |    |    |
| Eastern redcedar-hardwood | 5.3            | --                      | --    | 1.9   | 3.4   | --    | --    | --    | --  | -- | -- |
| Oak-hickory               | 5.1            | --                      | --    | 2.4   | --    | 2.7   | --    | --    | --  | -- | -- |
| Post-blackjack oak        | --             | --                      | --    | --    | --    | --    | --    | --    | --  | -- | -- |
| Upland plains hardwoods   | 6.4            | --                      | --    | 5.5   | --    | --    | 0.9   | --    | --  | -- | -- |
| Elm-ash-cottonwood        | 51.8           | --                      | 1.2   | 19.2  | 9.9   | 15.3  | 1.5   | 4.7   | --  | -- | -- |
| Cottonwood                | 5.1            | --                      | --    | 2.5   | 2.6   | --    | --    | --    | --  | -- | -- |
| Willow                    | 2.0            | --                      | --    | 1.0   | --    | --    | --    | 1.0   | --  | -- | -- |
| Lowland plains hardwoods  | 35.2           | --                      | --    | 20.5  | 4.7   | 7.2   | 1.4   | 1.4   | --  | -- | -- |
| Upland elm-ash-locust     | 19.9           | --                      | --    | 9.6   | 6.6   | 3.7   | --    | --    | --  | -- | -- |
| Nonstocked                | 19.2           | --                      | --    | 10.4  | 4.7   | 3.1   | 1.0   | --    | --  | -- | -- |
| All types                 | 150.0          | --                      | 1.2   | 73.0  | 31.9  | 32.0  | 4.8   | 7.1   | --  | -- | -- |

Table 30.--Area of wooded strips by forest type, basal-area class, and Forest Survey Unit, Kansas, 1981  
(In thousand acres)

| ALL UNITS                 |             |   |       |       |       |        |         |         |         |         |      |     |    |
|---------------------------|-------------|---|-------|-------|-------|--------|---------|---------|---------|---------|------|-----|----|
| Forest type               | All classes | Basal-area class (square feet per acre) |       |       |       |        |         |         |         |         |      |     |    |
|                           |             | 0-20                                    | 21-40 | 41-50 | 61-80 | 81-100 | 101-120 | 121-140 | 141-160 | 161-180 | 181+ |     |    |
| Eastern redcedar-hardwood | 5.3         | --                                      | 1.9   | --    | --    | --     | --      | --      | --      | --      | 3.4  | --  | -- |
| Oak-hickory               | 5.1         | 1.2                                     | 1.5   | --    | 1.2   | --     | --      | --      | --      | --      | --   | 1.2 | -- |
| Post-blackjack oak        | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Upland plains hardwoods   | 6.4         | --                                      | 1.4   | 1.6   | 0.9   | 1.4    | --      | 1.1     | --      | --      | --   | --  | -- |
| Elm-ash-cottonwood        | 51.8        | 1.4                                     | 10.1  | 5.5   | 12.5  | 3.6    | 4.0     | 8.6     | 4.2     | 1.0     | 0.9  | --  | -- |
| Cottonwood                | 5.1         | --                                      | --    | --    | --    | 2.5    | --      | --      | --      | --      | 2.6  | --  | -- |
| Willow                    | 2.0         | --                                      | --    | --    | --    | --     | 1.0     | --      | --      | 1.0     | --   | --  | -- |
| Lowland plains hardwoods  | 35.2        | 3.0                                     | 6.1   | 2.5   | 8.8   | 4.0    | 6.5     | 1.4     | --      | 2.9     | --   | --  | -- |
| Upland elm-ash-focust     | 19.9        | --                                      | 3.9   | 5.2   | 5.5   | 2.4    | --      | 1.4     | --      | --      | 1.5  | --  | -- |
| Nonstocked                | 19.2        | 3.8                                     | 5.5   | --    | 5.5   | 1.4    | 1.4     | 1.6     | --      | --      | --   | --  | -- |
| All types                 | 150.0       | 9.4                                     | 30.4  | 14.8  | 34.4  | 15.3   | 12.9    | 14.1    | 4.2     | 6.1     | 8.4  | --  | -- |
| NORTHEASTERN UNIT         |             |   |       |       |       |        |         |         |         |         |      |     |    |
| Eastern redcedar-hardwood | 1.9         | --                                      | 1.9   | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Oak-hickory               | 2.4         | 1.2                                     | --    | --    | 1.2   | --     | --      | --      | --      | --      | --   | --  | -- |
| Post-blackjack oak        | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Upland plains hardwoods   | 3.9         | --                                      | --    | 1.6   | 0.9   | 1.4    | --      | --      | --      | --      | --   | --  | -- |
| Elm-ash-cottonwood        | 18.0        | 1.4                                     | 1.4   | 4.1   | 5.6   | --     | 2.7     | 1.0     | 0.9     | --      | 0.9  | --  | -- |
| Cottonwood                | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Willow                    | 1.0         | --                                      | --    | --    | --    | --     | 1.0     | --      | --      | --      | --   | --  | -- |
| Lowland plains hardwoods  | 16.4        | 0.9                                     | 1.2   | 1.2   | 4.7   | 1.6    | 3.9     | --      | --      | 2.9     | --   | --  | -- |
| Upland elm-ash-focust     | 11.1        | --                                      | 1.4   | 2.7   | 4.1   | --     | --      | 1.4     | --      | --      | 1.5  | --  | -- |
| Nonstocked                | 7.9         | 2.4                                     | 1.4   | --    | 1.1   | 1.4    | --      | 1.6     | --      | --      | --   | --  | -- |
| All types                 | 62.6        | 5.9                                     | 7.3   | 9.6   | 17.6  | 4.4    | 7.6     | 4.0     | 0.9     | 2.9     | 2.4  | --  | -- |
| SOUTHEASTERN UNIT         |             |   |       |       |       |        |         |         |         |         |      |     |    |
| Eastern redcedar-hardwood | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Oak-hickory               | 2.7         | --                                      | 1.5   | --    | --    | --     | --      | --      | --      | 1.2     | --   | --  | -- |
| Post-blackjack oak        | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Upland plains hardwoods   | 2.5         | --                                      | 1.4   | --    | --    | --     | --      | 1.1     | --      | --      | --   | --  | -- |
| Elm-ash-cottonwood        | 16.1        | --                                      | 5.5   | 1.4   | 3.5   | 3.6    | --      | 1.1     | --      | 1.0     | --   | --  | -- |
| Cottonwood                | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Willow                    | 1.0         | --                                      | --    | --    | --    | --     | --      | --      | --      | 1.0     | --   | --  | -- |
| Lowland plains hardwoods  | 13.7        | 2.1                                     | 2.4   | 1.3   | 4.1   | 2.4    | --      | 1.4     | --      | --      | --   | --  | -- |
| Upland elm-ash-focust     | 6.3         | --                                      | 2.5   | --    | 1.4   | 2.4    | --      | --      | --      | --      | --   | --  | -- |
| Nonstocked                | 8.0         | 1.4                                     | 4.1   | --    | 1.1   | --     | 1.4     | --      | --      | --      | --   | --  | -- |
| All types                 | 50.3        | 3.5                                     | 17.4  | 2.7   | 10.1  | 8.4    | 1.4     | 3.6     | --      | 3.2     | --   | --  | -- |
| WESTERN UNIT              |             |   |       |       |       |        |         |         |         |         |      |     |    |
| Eastern redcedar-hardwood | 3.4         | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | 3.4  | --  | -- |
| Oak-hickory               | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Post-blackjack oak        | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Upland plains hardwoods   | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Elm-ash-cottonwood        | 17.7        | --                                      | 3.2   | --    | 3.4   | --     | 1.3     | 6.5     | 3.3     | --      | --   | --  | -- |
| Cottonwood                | 5.1         | --                                      | --    | --    | --    | 2.5    | --      | --      | --      | --      | 2.6  | --  | -- |
| Willow                    | --          | --                                      | --    | --    | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Lowland plains hardwoods  | 5.1         | --                                      | 2.5   | --    | --    | --     | 2.6     | --      | --      | --      | --   | --  | -- |
| Upland elm-ash-focust     | 2.5         | --                                      | --    | 2.5   | --    | --     | --      | --      | --      | --      | --   | --  | -- |
| Nonstocked                | 3.3         | --                                      | --    | --    | 3.3   | --     | --      | --      | --      | --      | --   | --  | -- |
| All types                 | 37.1        | --                                      | 5.7   | 2.5   | 6.7   | 2.5    | 3.9     | 6.5     | 3.3     | --      | 6.0  | --  | -- |

Table 31.---Area of wooded strips by forest type and stand-age class, Kansas, 1981  
(In thousand acres)

| Forest type               | All<br>classes | Stand-age class (years) |       |       |       |       |       |       |       |       |        |      |
|---------------------------|----------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|
|                           |                | 1-10                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101+ |
| Eastern redcedar-hardwood | 5.3            | --                      | 1.9   | 3.4   | --    | --    | --    | --    | --    | --    | --     | --   |
| Oak-hickory               | 5.1            | 1.2                     | 1.5   | --    | --    | 2.4   | --    | --    | --    | --    | --     | --   |
| Post-blackjack oak        | --             | --                      | --    | --    | --    | --    | --    | --    | --    | --    | --     | --   |
| Upland plains hardwoods   | 6.4            | --                      | 3.6   | --    | 1.4   | --    | 1.4   | --    | --    | --    | --     | --   |
| Elm-ash-cottonwood        | 51.8           | 6.1                     | 17.1  | 10.2  | 4.8   | 5.1   | 2.1   | 3.2   | 3.2   | --    | --     | --   |
| Cottonwood                | 5.1            | --                      | 2.5   | --    | --    | --    | --    | 2.6   | --    | --    | --     | --   |
| Willow                    | 2.0            | 1.0                     | --    | --    | 1.0   | --    | --    | --    | --    | --    | --     | --   |
| Lowland plains hardwoods  | 35.2           | 8.5                     | 7.8   | 3.8   | 5.4   | 2.8   | 2.6   | 2.7   | 1.6   | --    | --     | --   |
| Upland elm-ash-lacust     | 19.9           | 3.0                     | 3.9   | 3.8   | 5.3   | --    | --    | 2.5   | --    | 1.4   | --     | --   |
| Nonstocked                | 19.2           | 5.3                     | 4.1   | 2.4   | --    | --    | 3.0   | 3.3   | --    | --    | 1.1    | --   |
| All types                 | 150.0          | 25.1                    | 42.4  | 23.6  | 17.9  | 10.3  | 9.1   | 14.3  | 4.8   | 1.4   | 1.1    | --   |

Table 32.--Area of wooded strips by forest type, physiographic class, and ownership class, Kansas, 1981  
(In thousand acres)

| Forest type and<br>physiographic class | All<br>classes | Ownership class    |                  |        |       |                         |                            |
|--|----------------|--------------------|------------------|--------|-------|-------------------------|----------------------------|
|  |                | National<br>Forest | Misc.<br>federal | Indian | State | County and<br>municipal | Farmer<br>Misc.<br>private |
| Eastern redcedar-hardwood              |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --                         |
| Mesic                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeromesic                              | 5.3            | --                 | --               | --     | --    | --                      | 5.3                        |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 5.3            | --                 | --               | --     | --    | --                      | 5.3                        |
| Oak-hickory                            |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | 1.5            | --                 | --               | --     | --    | --                      | 1.5                        |
| Mesic                                  | 3.6            | --                 | --               | --     | --    | --                      | 3.6                        |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 5.1            | --                 | --               | --     | --    | --                      | 5.1                        |
| Post-blackjack oak                     |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --                         |
| Mesic                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | --             | --                 | --               | --     | --    | --                      | --                         |
| Upland plains hardwoods                |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --                         |
| Mesic                                  | 1.4            | --                 | --               | --     | --    | --                      | 1.4                        |
| Xeromesic                              | 5.0            | --                 | --               | --     | --    | --                      | 3.4                        |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | 1.6                        |
| All classes                            | 6.4            | --                 | --               | --     | --    | --                      | 4.8                        |
| Elm-ash-cottonwood                     |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | 12.9           | --                 | 3.3              | --     | --    | --                      | 5.0                        |
| Mesic                                  | 38.9           | --                 | 1.3              | --     | --    | --                      | 33.5                       |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 51.8           | --                 | 4.6              | --     | --    | --                      | 38.5                       |
| Cottonwood                             |                |                    |                  |        |       |                         |                            |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --                         |
| Hydromesic                             | 2.6            | --                 | --               | --     | --    | --                      | 2.6                        |
| Mesic                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| Xeromesic                              | 2.5            | --                 | --               | --     | --    | --                      | 2.5                        |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --                         |
| All classes                            | 5.1            | --                 | --               | --     | --    | --                      | 2.5                        |

(Table 32 continued on next page)

(Table 32 continued)

| Forest type and<br>physiographic class | All<br>classes | Ownership class    |                  |        |       |                         |        |                  |
|--|----------------|--------------------|------------------|--------|-------|-------------------------|--------|------------------|
|  |                | National<br>Forest | Misc.<br>federal | Indian | State | County and<br>municipal | Farmer | Misc.<br>private |
| Willow                                 |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | 1.0            | --                 | --               | --     | --    | --                      | 1.0    | --               |
| Mesic                                  | 1.0            | --                 | --               | --     | --    | --                      | 1.0    | --               |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All classes                            | 2.0            | --                 | --               | --     | --    | --                      | 2.0    | --               |
| Lowland plains hardwoods               |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | 1.4            | --                 | --               | --     | --    | --                      | 1.4    | --               |
| Hydromesic                             | 10.9           | --                 | --               | --     | --    | --                      | 10.0   | 0.9              |
| Mesic                                  | 22.9           | --                 | --               | --     | --    | --                      | 18.3   | 4.6              |
| Xeromesic                              | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All classes                            | 35.2           | --                 | --               | --     | --    | --                      | 29.7   | 5.5              |
| Upland elm-ash-locust                  |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Mesic                                  | 1.5            | --                 | --               | --     | --    | --                      | --     | 1.5              |
| Xeromesic                              | 15.6           | --                 | 1.2              | --     | --    | --                      | 7.8    | 6.6              |
| Xeric                                  | 2.8            | --                 | --               | --     | --    | --                      | 2.8    | --               |
| All classes                            | 19.9           | --                 | 1.2              | --     | --    | --                      | 10.6   | 8.1              |
| Nonstocked                             |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | --             | --                 | --               | --     | --    | --                      | --     | --               |
| Hydromesic                             | 1.4            | --                 | --               | --     | --    | --                      | 1.4    | --               |
| Mesic                                  | 10.8           | --                 | --               | --     | --    | --                      | 7.7    | 3.1              |
| Xeromesic                              | 7.0            | --                 | --               | --     | --    | --                      | 7.0    | --               |
| Xeric                                  | --             | --                 | --               | --     | --    | --                      | --     | --               |
| All classes                            | 19.2           | --                 | --               | --     | --    | --                      | 16.1   | 3.1              |
| All types                              |                |                    |                  |        |       |                         |        |                  |
| Hydric                                 | 1.4            | --                 | --               | --     | --    | --                      | 1.4    | --               |
| Hydromesic                             | 30.3           | --                 | 3.3              | --     | --    | --                      | 18.9   | 8.1              |
| Mesic                                  | 80.1           | --                 | 1.3              | --     | --    | --                      | 65.5   | 13.3             |
| Xeromesic                              | 35.4           | --                 | 1.2              | --     | --    | --                      | 26.0   | 8.2              |
| Xeric                                  | 2.8            | --                 | --               | --     | --    | --                      | 2.8    | --               |
| All classes                            | 150.0          | --                 | 5.8              | --     | --    | --                      | 114.6  | 29.6             |

Table 33.--Area of wooded strips in private ownership by ownership class, owner tenure, and ownership size class, Kansas, 1981

(In thousand acres)

| Ownership class<br>and owner tenure  | ALL UNITS      |                              |      |       |       |        |         |      |
|--------------------------------------|----------------|------------------------------|------|-------|-------|--------|---------|------|
|                                      | All<br>classes | Ownership size class (acres) |      |       |       |        |         |      |
|                                      |                | 1-5                          | 5-10 | 10-20 | 20-50 | 50-100 | 100-500 | 500+ |
| Farmer                               |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 14.2           | --                           | 3.7  | 5.1   | 1.0   | 4.4    | --      | --   |
| 5-9 years                            | 19.3           | 3.3                          | 4.1  | 6.2   | 2.9   | 2.8    | --      | --   |
| 10-19 years                          | 24.5           | --                           | 8.2  | 7.9   | 7.1   | 1.3    | --      | --   |
| 20+ years                            | 56.7           | 1.6                          | 25.9 | 15.9  | 8.7   | 2.4    | 2.2     | --   |
| Total                                | 114.7          | 4.9                          | 41.9 | 35.1  | 19.7  | 10.9   | 2.2     | --   |
| Miscellaneous private<br>corporation |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 1.4            | --                           | 1.4  | --    | --    | --     | --      | --   |
| 5-9 years                            | 1.0            | --                           | --   | --    | --    | --     | 1.0     | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| Total                                | 2.4            | --                           | 1.4  | --    | --    | --     | 1.0     | --   |
| Miscellaneous private<br>individual  |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 3.7            | --                           | --   | 2.3   | 1.4   | --     | --      | --   |
| 5-9 years                            | 4.4            | 3.0                          | 1.4  | --    | --    | --     | --      | --   |
| 10-19 years                          | 5.2            | 0.9                          | --   | 4.3   | --    | --     | --      | --   |
| 20+ years                            | 13.8           | 1.4                          | 2.5  | 7.3   | --    | 1.6    | 1.0     | --   |
| Total                                | 27.1           | 5.3                          | 3.9  | 13.9  | 1.4   | 1.6    | 1.0     | --   |
| All owners                           |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 19.3           | --                           | 5.1  | 7.4   | 2.4   | 4.4    | --      | --   |
| 5-9 years                            | 24.7           | 6.3                          | 5.5  | 6.2   | 2.9   | 2.8    | 1.0     | --   |
| 10-19 years                          | 29.7           | 0.9                          | 8.2  | 12.2  | 7.1   | 1.3    | --      | --   |
| 20+ years                            | 70.5           | 3.0                          | 28.4 | 23.2  | 8.7   | 4.0    | 3.2     | --   |
| Total                                | 144.2          | 10.2                         | 47.2 | 49.0  | 21.1  | 12.5   | 4.2     | --   |
| NORTHEASTERN UNIT                    |                |                              |      |       |       |        |         |      |
| Farmer                               |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 7.1            | --                           | 1.5  | 1.2   | --    | 4.4    | --      | --   |
| 5-9 years                            | 11.4           | --                           | 2.7  | 4.6   | 2.9   | 1.2    | --      | --   |
| 10-19 years                          | 12.1           | --                           | 5.6  | 2.9   | 3.6   | --     | --      | --   |
| 20+ years                            | 18.5           | 1.6                          | 5.5  | 5.0   | 4.2   | --     | 2.2     | --   |
| Total                                | 49.1           | 1.6                          | 15.3 | 13.7  | 10.7  | 5.6    | 2.2     | --   |
| Miscellaneous private<br>corporation |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 1.4            | --                           | 1.4  | --    | --    | --     | --      | --   |
| 5-9 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| Total                                | 1.4            | --                           | 1.4  | --    | --    | --     | --      | --   |
| Miscellaneous private<br>individual  |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | 3.0            | 3.0                          | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | 2.5            | 0.9                          | --   | 1.6   | --    | --     | --      | --   |
| 20+ years                            | 6.6            | 1.4                          | --   | 2.6   | --    | 1.6    | 1.0     | --   |
| Total                                | 12.1           | 5.3                          | --   | 4.2   | --    | 1.6    | 1.0     | --   |
| All owners                           |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 3.5            | --                           | 2.9  | 1.2   | --    | 4.4    | --      | --   |
| 5-9 years                            | 14.4           | 3.0                          | 2.7  | 4.6   | 2.9   | 1.2    | --      | --   |
| 10-19 years                          | 14.6           | 0.9                          | 5.6  | 4.5   | 3.6   | --     | --      | --   |
| 20+ years                            | 25.1           | 3.0                          | 5.5  | 7.5   | 4.2   | 1.6    | 3.2     | --   |
| Total                                | 57.6           | 6.9                          | 16.7 | 17.9  | 10.7  | 7.2    | 3.2     | --   |

(Table 33 continued on next page)

(Table 33 continued)

| Ownership class<br>and owner tenure  | All<br>classes | SOUTHEASTERN UNIT            |      |       |       |        |         |      |
|--------------------------------------|----------------|------------------------------|------|-------|-------|--------|---------|------|
|                                      |                | Ownership size class (acres) |      |       |       |        |         |      |
|                                      |                | 1-5                          | 5-10 | 10-20 | 20-50 | 50-100 | 100-500 | 500+ |
| Farmer                               |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 7.1            | --                           | 2.2  | 3.9   | 1.0   | --     | --      | --   |
| 5-9 years                            | 4.6            | --                           | 1.4  | 1.6   | --    | 1.6    | --      | --   |
| 10-19 years                          | 12.4           | --                           | 2.6  | 5.0   | 3.5   | 1.3    | --      | --   |
| 20+ years                            | 13.4           | --                           | 2.4  | 7.5   | 1.1   | 2.4    | --      | --   |
| Total                                | 37.5           | --                           | 8.6  | 18.0  | 5.6   | 5.3    | --      | --   |
| Miscellaneous private<br>corporation |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | 1.0            | --                           | --   | --    | --    | --     | 1.0     | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| Total                                | 1.0            | --                           | --   | --    | --    | --     | 1.0     | --   |
| Miscellaneous private<br>individual  |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 3.7            | --                           | --   | 2.3   | 1.4   | --     | --      | --   |
| 5-9 years                            | 1.4            | --                           | 1.4  | --    | --    | --     | --      | --   |
| 10-19 years                          | 2.7            | --                           | --   | 2.7   | --    | --     | --      | --   |
| 20+ years                            | 1.4            | --                           | --   | 1.4   | --    | --     | --      | --   |
| Total                                | 9.2            | --                           | 1.4  | 6.4   | 1.4   | --     | --      | --   |
| All owners                           |                |                              |      |       |       |        |         |      |
| 1-4 years                            | 10.8           | --                           | 2.2  | 6.2   | 2.4   | --     | --      | --   |
| 5-9 years                            | 7.0            | --                           | 2.8  | 1.6   | --    | 1.6    | 1.0     | --   |
| 10-19 years                          | 15.1           | --                           | 2.6  | 7.7   | 3.5   | 1.3    | --      | --   |
| 20+ years                            | 14.8           | --                           | 2.4  | 8.9   | 1.1   | 2.4    | --      | --   |
| Total                                | 47.7           | --                           | 10.0 | 24.4  | 7.0   | 5.3    | 1.0     | --   |
| WESTERN UNIT                         |                |                              |      |       |       |        |         |      |
| Farmer                               |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | 3.3            | 3.3                          | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | 24.8           | --                           | 18.0 | 3.4   | 3.4   | --     | --      | --   |
| Total                                | 28.1           | 3.3                          | 18.0 | 3.4   | 3.4   | --     | --      | --   |
| Miscellaneous private<br>corporation |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| Total                                | --             | --                           | --   | --    | --    | --     | --      | --   |
| Miscellaneous private<br>individual  |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | 5.8            | --                           | 2.5  | 3.3   | --    | --     | --      | --   |
| Total                                | 5.8            | --                           | 2.5  | 3.3   | --    | --     | --      | --   |
| All owners                           |                |                              |      |       |       |        |         |      |
| 1-4 years                            | --             | --                           | --   | --    | --    | --     | --      | --   |
| 5-9 years                            | 3.3            | 3.3                          | --   | --    | --    | --     | --      | --   |
| 10-19 years                          | --             | --                           | --   | --    | --    | --     | --      | --   |
| 20+ years                            | 30.6           | --                           | 20.5 | 6.7   | 3.4   | --     | --      | --   |
| Total                                | 33.9           | 3.3                          | 20.5 | 6.7   | 3.4   | --     | --      | --   |

Table 34.--Number of all live trees on commercial forest land by species group and diameter class, Kansas, 1981

(In thousand trees)

| Species group         | All classes | Diameter class (inches at breast height) |         |         |         |          |           |           |           |           |           |           |           |     |    |    |    | 29.0-39.0+ |
|-----------------------|-------------|--|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|----|----|----|------------|
|                       |             | 1.0-2.9                                  | 3.0-4.9 | 5.0-6.9 | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 |     |    |    |    |            |
| SOFTWOODS             |             |  |         |         |         |          |           |           |           |           |           |           |           |     |    |    |    |            |
| Eastern redcedar      | 8,560       | 4,553                                    | 2,393   | 997     | 408     | 84       | 69        | 39        | 10        | 2         | 5         | --        | --        | --  | -- | -- | -- |            |
| Total                 | 8,560       | 4,553                                    | 2,393   | 997     | 408     | 84       | 69        | 39        | 10        | 2         | 5         | --        | --        | --  | -- | -- | -- |            |
| HARDWOODS             |             |  |         |         |         |          |           |           |           |           |           |           |           |     |    |    |    |            |
| Bur oak               | 8,760       | 3,323                                    | 1,100   | 1,133   | 715     | 524      | 332       | 288       | 299       | 264       | 209       | 198       | 279       | 88  | 8  | 8  | 8  |            |
| Select white oak      | 13,569      | 2,932                                    | 3,198   | 2,463   | 1,908   | 1,460    | 702       | 346       | 253       | 125       | 81        | 44        | 49        | 7   | 1  | 1  | 1  |            |
| Other white oak       | 13,305      | 2,334                                    | 5,017   | 3,098   | 1,409   | 809      | 294       | 187       | 87        | 48        | 6         | 10        | 6         | --  | -- | -- | -- |            |
| Select red oak        | 8,696       | 2,420                                    | 1,904   | 899     | 950     | 795      | 647       | 322       | 265       | 167       | 141       | 63        | 92        | 28  | 3  | 3  | 3  |            |
| Other red oak         | 7,875       | 2,964                                    | 1,327   | 1,253   | 866     | 460      | 346       | 184       | 133       | 105       | 79        | 59        | 78        | 19  | 2  | 2  | 2  |            |
| Select hickory        | 14,239      | 8,299                                    | 2,237   | 1,960   | 899     | 362      | 198       | 151       | 61        | 49        | 15        | 4         | 4         | --  | -- | -- | -- |            |
| Other hickory         | 12,579      | 6,802                                    | 2,943   | 1,474   | 730     | 378      | 150       | 66        | 12        | 11        | 7         | 3         | 3         | --  | -- | -- | -- |            |
| pecan                 | 2,783       | 832                                      | 937     | 317     | 220     | 204      | 107       | 69        | 37        | 23        | 13        | 15        | 5         | 4   | -- | -- | -- |            |
| Hard maple            | 4,477       | 2,872                                    | 944     | 260     | 235     | 88       | 51        | 19        | 2         | 2         | 2         | 1         | --        | 1   | -- | -- | -- |            |
| Soft maple            | 3,209       | 1,322                                    | 505     | 292     | 279     | 194      | 122       | 150       | 98        | 78        | 47        | 36        | 60        | 20  | 6  | 6  | 6  |            |
| Ash                   | 38,977      | 19,576                                   | 8,911   | 4,173   | 2,791   | 1,445    | 681       | 545       | 306       | 246       | 110       | 70        | 117       | 6   | -- | -- | -- |            |
| Cottonwood            | 8,576       | 1,834                                    | 366     | 1,215   | 997     | 1,085    | 816       | 658       | 452       | 269       | 252       | 107       | 303       | 158 | 64 | 64 | 64 |            |
| Basswood              | 5,162       | 3,681                                    | 643     | 259     | 171     | 136      | 108       | 70        | 38        | 21        | 19        | 9         | 6         | 1   | -- | -- | -- |            |
| Elm                   | 98,365      | 67,331                                   | 19,142  | 6,684   | 2,684   | 1,202    | 542       | 297       | 161       | 111       | 69        | 43        | 84        | 14  | 1  | 1  | 1  |            |
| Black walnut          | 27,581      | 10,664                                   | 6,161   | 4,485   | 2,085   | 1,833    | 1,077     | 639       | 356       | 153       | 64        | 44        | 16        | 4   | -- | -- | -- |            |
| Willow                | 5,094       | 2,517                                    | 904     | 466     | 332     | 238      | 245       | 153       | 94        | 60        | 45        | 19        | 19        | 1   | 1  | 1  | 1  |            |
| Roxelder              | 12,941      | 5,172                                    | 2,862   | 2,087   | 1,144   | 660      | 436       | 197       | 159       | 108       | 44        | 30        | 32        | 9   | 1  | 1  | 1  |            |
| Hackberry             | 54,901      | 28,513                                   | 12,848  | 5,238   | 3,149   | 1,943    | 1,215     | 762       | 538       | 303       | 174       | 105       | 87        | 26  | -- | -- | -- |            |
| Sycamore              | 2,315       | 798                                      | 567     | 140     | 207     | 108      | 106       | 73        | 96        | 51        | 37        | 39        | 55        | 31  | 7  | 7  | 7  |            |
| Other hardwoods       | 53,074      | 27,537                                   | 11,647  | 6,665   | 3,286   | 1,583    | 1,023     | 547       | 336       | 185       | 122       | 60        | 64        | 18  | 1  | 1  | 1  |            |
| Noncommercial species | 58,163      | 35,575                                   | 13,691  | 4,894   | 2,160   | 926      | 498       | 177       | 117       | 60        | 25        | 17        | 20        | 3   | -- | -- | -- |            |
| Total                 | 454,641     | 237,298                                  | 97,854  | 49,455  | 27,217  | 16,433   | 9,696     | 5,900     | 3,900     | 2,439     | 1,561     | 976       | 1,379     | 438 | 95 | 95 | 95 |            |
| All species           | 463,201     | 241,851                                  | 100,247 | 50,452  | 27,625  | 16,517   | 9,765     | 5,939     | 3,910     | 2,441     | 1,566     | 976       | 1,379     | 438 | 95 | 95 | 95 |            |



Table 35.--Number of growing-stock trees on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand trees)

| Species group    | All classes | Diameter class (inches at breast height) |         |         |         |          |           |           |           |           |           |           |           |           |    |    |    | 29.0-39.0+ |
|------------------|-------------|--|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|----|----|------------|
|                  |             | 1.0-2.9                                  | 3.0-4.9 | 5.0-6.9 | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 | 29.0-38.9 |    |    |    |            |
| SOFTWOODS        |             |  |         |         |         |          |           |           |           |           |           |           |           |           |    |    |    |            |
| Eastern redcedar | 7,926       | 4,430                                    | 2,255   | 766     | 314     | 66       | 63        | 22        | 3         | 2         | 5         | --        | --        | --        | -- | -- | -- |            |
| Total            | 7,926       | 4,430                                    | 2,255   | 766     | 314     | 66       | 63        | 22        | 3         | 2         | 5         | --        | --        | --        | -- | -- | -- |            |
| HARDWOODS        |             |  |         |         |         |          |           |           |           |           |           |           |           |           |    |    |    |            |
| Bur oak          | 6,707       | 2,504                                    | 894     | 868     | 527     | 422      | 221       | 225       | 233       | 208       | 172       | 152       | 212       | 65        | 4  |    |    |            |
| Select white oak | 7,626       | 1,856                                    | 1,804   | 1,198   | 922     | 809      | 428       | 242       | 174       | 82        | 52        | 24        | 30        | 5         | -- |    |    |            |
| Other white oak  | 10,252      | 1,502                                    | 4,174   | 2,347   | 1,108   | 666      | 179       | 163       | 67        | 34        | 4         | 5         | 3         | --        | -- |    |    |            |
| Select red oak   | 6,987       | 1,944                                    | 1,520   | 656     | 834     | 683      | 524       | 226       | 214       | 141       | 108       | 40        | 77        | 18        | 2  |    |    |            |
| Other red oak    | 5,559       | 2,140                                    | 994     | 819     | 584     | 389      | 216       | 154       | 92        | 77        | 67        | 50        | 61        | 15        | 1  |    |    |            |
| Select hickory   | 11,987      | 6,884                                    | 2,025   | 1,601   | 750     | 347      | 156       | 117       | 53        | 42        | 8         | 1         | 3         | --        | -- |    |    |            |
| Other hickory    | 10,375      | 5,310                                    | 2,704   | 1,270   | 550     | 339      | 107       | 62        | 12        | 11        | 7         | 3         | --        | --        | -- |    |    |            |
| Pecan            | 2,198       | 707                                      | 684     | 204     | 207     | 185      | 89        | 50        | 27        | 18        | 8         | 11        | 4         | 4         | -- |    |    |            |
| Hard maple       | 3,605       | 2,360                                    | 683     | 198     | 211     | 81       | 45        | 19        | 2         | 2         | 2         | 1         | --        | 1         | -- |    |    |            |
| Soft maple       | 2,071       | 797                                      | 226     | 177     | 258     | 141      | 87        | 116       | 84        | 63        | 38        | 28        | 43        | 10        | 3  |    |    |            |
| Ash              | 31,604      | 16,178                                   | 7,589   | 3,029   | 2,202   | 1,149    | 482       | 388       | 216       | 168       | 74        | 42        | 82        | 5         | -- |    |    |            |
| Cottonwood       | 7,574       | 1,581                                    | 366     | 1,168   | 798     | 972      | 675       | 577       | 417       | 250       | 230       | 88        | 278       | 131       | 43 |    |    |            |
| Basswood         | 3,105       | 2,115                                    | 432     | 198     | 86      | 72       | 79        | 59        | 26        | 19        | 7         | 9         | 3         | --        | -- |    |    |            |
| Elm              | 73,418      | 53,415                                   | 13,971  | 3,427   | 1,410   | 620      | 196       | 169       | 73        | 42        | 29        | 25        | 35        | 6         | -- |    |    |            |
| Black walnut     | 22,281      | 8,778                                    | 4,961   | 3,572   | 1,602   | 1,537    | 839       | 517       | 266       | 126       | 41        | 31        | 8         | 3         | -- |    |    |            |
| Willow           | 4,236       | 2,275                                    | 904     | 316     | 205     | 132      | 147       | 104       | 66        | 40        | 24        | 12        | 10        | --        | -- |    |    |            |
| Boxelder         | 7,033       | 3,507                                    | 1,487   | 948     | 584     | 201      | 164       | 67        | 38        | 26        | 6         | 3         | 2         | --        | -- |    |    |            |
| Hackberry        | 42,443      | 22,043                                   | 10,313  | 3,884   | 2,257   | 1,497    | 896       | 584       | 430       | 241       | 130       | 82        | 67        | 19        | -- |    |    |            |
| Sycamore         | 2,010       | 798                                      | 449     | 112     | 135     | 73       | 94        | 64        | 93        | 47        | 31        | 39        | 45        | 24        | 6  |    |    |            |
| Other hardwoods  | 30,305      | 17,739                                   | 7,006   | 2,560   | 1,315   | 724      | 387       | 227       | 154       | 102       | 46        | 25        | 16        | 4         | -- |    |    |            |
| Total            | 291,476     | 154,433                                  | 63,186  | 28,552  | 16,545  | 11,039   | 6,011     | 4,130     | 2,737     | 1,739     | 1,084     | 671       | 979       | 310       | 60 |    |    |            |
| All species      | 299,402     | 158,863                                  | 65,441  | 29,318  | 16,859  | 11,105   | 6,074     | 4,152     | 2,740     | 1,741     | 1,089     | 671       | 979       | 310       | 60 |    |    |            |

Table 36.--Number of short-log trees on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand trees)

| Species group    | All<br>classes | Diameter class (inches at breast height) |             |              |               |               |               |               |               |               |               |    |    |    |    | 23.0-<br>28.9 | 28.9<br>38.9 | 39.0+ |
|------------------|----------------|--|-------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----|----|----|----|---------------|--------------|-------|
|                  |                | 5.0-<br>6.9                              | 7.0-<br>8.9 | 9.0-<br>10.9 | 11.0-<br>12.9 | 13.0-<br>14.9 | 15.0-<br>16.9 | 17.0-<br>18.9 | 19.0-<br>20.9 | 21.0-<br>22.9 | 23.0-<br>28.9 |    |    |    |    |               |              |       |
| SOFTWOODS        |                |  |             |              |               |               |               |               |               |               |               |    |    |    |    |               |              |       |
| Eastern redcedar | 140            | 67                                       | 53          | 7            | --            | 9             | 4             | --            | --            | --            | --            | -- | -- | -- | -- | --            | --           |       |
| Total            | 140            | 67                                       | 53          | 7            | --            | 9             | 4             | --            | --            | --            | --            | -- | -- | -- | -- | --            | --           |       |
| HARDWOODS        |                |  |             |              |               |               |               |               |               |               |               |    |    |    |    |               |              |       |
| Bur oak          | 419            | 135                                      | 32          | 65           | 53            | 24            | 23            | 24            | 6             | 16            | 28            | 11 | 2  |    |    |               |              |       |
| Select white oak | 791            | 217                                      | 196         | 195          | 92            | 33            | 30            | 11            | 5             | 4             | 7             | 1  | -- |    |    |               |              |       |
| Other white oak  | 581            | 324                                      | 126         | 69           | 57            | --            | 3             | --            | --            | --            | 2             | -- | -- |    |    |               |              |       |
| Select red oak   | 274            | 80                                       | 62          | 39           | 39            | 35            | 10            | --            | 4             | 2             | 2             | 1  | -- |    |    |               |              |       |
| Other red oak    | 435            | 136                                      | 148         | 47           | 71            | 8             | 16            | 7             | --            | --            | 2             | -- | -- |    |    |               |              |       |
| Select hickory   | 252            | 153                                      | 68          | 6            | --            | 17            | 2             | --            | 4             | 2             | --            | -- | -- |    |    |               |              |       |
| Other hickory    | 233            | 122                                      | 55          | 32           | 18            | 4             | --            | --            | --            | --            | 2             | -- | -- |    |    |               |              |       |
| pecan            | 65             | 25                                       | 13          | --           | 5             | 8             | 3             | 5             | 2             | 4             | --            | -- | -- |    |    |               |              |       |
| Hard maple       | 36             | 30                                       | --          | --           | 6             | --            | --            | --            | --            | --            | --            | -- | -- |    |    |               |              |       |
| Soft maple       | 60             | --                                       | --          | 16           | 19            | 7             | 7             | 3             | 2             | --            | 5             | 1  | -- |    |    |               |              |       |
| Ash              | 668            | 164                                      | 196         | 115          | 48            | 55            | 47            | 18            | 11            | 2             | 12            | -- | -- |    |    |               |              |       |
| Cottonwood       | 268            | --                                       | 60          | 41           | 107           | 9             | 23            | 5             | 7             | 6             | 4             | 4  | 2  |    |    |               |              |       |
| Basswood         | 49             | --                                       | --          | 17           | 17            | 3             | 5             | --            | 4             | --            | 2             | 1  | -- |    |    |               |              |       |
| Elm              | 1,859          | 957                                      | 481         | 208          | 90            | 46            | 33            | 16            | 9             | 3             | 13            | 3  | -- |    |    |               |              |       |
| Black walnut     | 860            | 318                                      | 163         | 161          | 108           | 59            | 28            | 7             | 9             | 5             | 2             | -- | -- |    |    |               |              |       |
| Willow           | 91             | 27                                       | --          | 27           | 15            | 10            | 4             | 4             | 4             | --            | --            | -- | -- |    |    |               |              |       |
| Boxelder         | 523            | 175                                      | 120         | 97           | 28            | 28            | 40            | 30            | 5             | --            | --            | -- | -- |    |    |               |              |       |
| Hackberry        | 1,354          | 464                                      | 376         | 148          | 169           | 107           | 41            | 23            | 11            | 7             | 6             | 2  | -- |    |    |               |              |       |
| Sycamore         | 56             | --                                       | 46          | --           | 7             | --            | 3             | --            | --            | --            | --            | -- | -- |    |    |               |              |       |
| Other hardwoods  | 2,085          | 1,081                                    | 565         | 191          | 96            | 79            | 35            | 13            | 9             | 8             | 6             | 1  | 1  |    |    |               |              |       |
| Total            | 10,959         | 4,408                                    | 2,707       | 1,474        | 1,045         | 532           | 353           | 166           | 92            | 59            | 93            | 25 | 5  |    |    |               |              |       |
| All species      | 11,099         | 4,475                                    | 2,760       | 1,481        | 1,045         | 541           | 357           | 166           | 92            | 59            | 93            | 25 | 5  |    |    |               |              |       |

Table 37.--Net volume of growing stock and sawtimber on commercial forest land by species group, Kansas, 1965 and 1981

| Species group    | Growing stock       |         | Sawtimber                         |           |
|------------------|---------------------|---------|-----------------------------------|-----------|
|                  | 1965 <sup>1/</sup>  | 1981    | 1965 <sup>1/</sup>                | 1981      |
|                  | Thousand cubic feet |         | Thousand board feet <sup>2/</sup> |           |
| SOFTWOODS        |                     |         |                                   |           |
| Eastern redcedar | 216                 | 4,591   | 511                               | 10,871    |
| Total            | 216                 | 4,591   | 511                               | 10,871    |
| HARDWOODS        |                     |         |                                   |           |
| Bur oak          | 36,925              | 60,920  | 173,124                           | 286,120   |
| Select white oak | 11,501              | 34,121  | 36,194                            | 107,383   |
| Other white oak  | 10,484              | 19,854  | 19,229                            | 36,531    |
| Select red oak   | 26,020              | 45,828  | 103,966                           | 183,457   |
| Other red oak    | 19,438              | 27,445  | 84,208                            | 118,665   |
| Hickory          | 13,103              | 29,081  | 30,502                            | 67,696    |
| Pecan            | 8,040               | 8,986   | 36,974                            | 28,043    |
| Hard maple       | 2,259               | 3,120   | 5,563                             | 6,280     |
| Soft maple       | 9,005               | 21,011  | 37,644                            | 37,834    |
| Ash              | 35,714              | 61,700  | 107,524                           | 185,760   |
| Cottonwood       | 101,052             | 134,292 | 459,058                           | 610,060   |
| Basswood         | 3,614               | 6,031   | 15,438                            | 25,763    |
| Elm              | 89,243              | 30,599  | 358,279                           | 69,531    |
| Black walnut     | 36,751              | 57,868  | 107,950                           | 169,979   |
| Willow           | 10,772              | 11,629  | 44,370                            | 47,901    |
| Hackberry        | 43,909              | 86,674  | 169,049                           | 299,581   |
| Sycamore         | 24,613              | 21,538  | 125,288                           | 105,631   |
| Other hardwoods  | 14,941              | 16,027  | 38,675                            | 119,143   |
| Total            | 502,384             | 706,724 | 1,953,035                         | 2,555,358 |
| All species      | 502,600             | 711,315 | 1,953,546                         | 2,566,229 |

<sup>1/</sup>Figures have been adjusted from those published after the 1965 survey to conform to 1981 areas because of changes in survey definitions and procedures.

<sup>2/</sup>International 1/4-inch rule.

Table 38.--Net volume of all live trees on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand cubic feet)

| Species group         | All classes | Diameter class (inches at breast height) |         |          |           |           |           |           |           |           |           |           |        |    |    |    |    | 29.0-39.0+ |
|-----------------------|-------------|--|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|----|----|----|----|------------|
|                       |             | 5.0-6.9                                  | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 | 29.0-38.9 |        |    |    |    |    |            |
| SOFTWOODS             |             |  |         |          |           |           |           |           |           |           |           |           |        |    |    |    |    |            |
| Eastern redcedar      | 5,560       | 1,757                                    | 1,507   | 555      | 880       | 495       | 165       | 65        | 136       | --        | --        | --        | --     | -- | -- | -- | -- |            |
| Total                 | 5,560       | 1,757                                    | 1,507   | 555      | 880       | 495       | 165       | 65        | 136       | --        | --        | --        | --     | -- | -- | -- | -- |            |
| HARDWOODS             |             |  |         |          |           |           |           |           |           |           |           |           |        |    |    |    |    |            |
| Bur oak               | 74,323      | 2,702                                    | 2,776   | 3,714    | 3,441     | 4,121     | 6,020     | 7,350     | 7,189     | 8,217     | 17,306    | 9,659     | 1,828  |    |    |    |    |            |
| Select white oak      | 51,342      | 6,172                                    | 8,006   | 9,441    | 7,059     | 4,882     | 4,516     | 3,154     | 2,573     | 1,664     | 3,060     | 690       | 125    |    |    |    |    |            |
| Other white oak       | 23,758      | 5,753                                    | 5,035   | 4,691    | 2,447     | 2,530     | 1,537     | 1,112     | 170       | 231       | 252       | --        | --     |    |    |    |    |            |
| Select red oak        | 50,853      | 2,237                                    | 4,375   | 5,853    | 7,090     | 4,566     | 5,710     | 4,465     | 4,779     | 2,314     | 6,201     | 2,729     | 534    |    |    |    |    |            |
| Other red oak         | 32,530      | 2,042                                    | 3,197   | 3,148    | 3,594     | 3,053     | 2,703     | 2,819     | 2,814     | 2,710     | 4,309     | 1,797     | 344    |    |    |    |    |            |
| Select hickory        | 19,345      | 3,617                                    | 3,753   | 3,022    | 2,133     | 2,721     | 1,484     | 1,634     | 533       | 190       | 258       | --        | --     |    |    |    |    |            |
| Other hickory         | 13,245      | 2,768                                    | 3,038   | 3,057    | 1,837     | 1,211     | 312       | 373       | 348       | 175       | 126       | --        | --     |    |    |    |    |            |
| pecan                 | 10,586      | 676                                      | 1,036   | 1,963    | 1,597     | 1,187     | 1,071     | 667       | 565       | 884       | 456       | 484       | --     |    |    |    |    |            |
| Hard maple            | 3,389       | 533                                      | 1,033   | 563      | 549       | 279       | 49        | 43        | 99        | 113       | --        | 128       | --     |    |    |    |    |            |
| Soft maple            | 24,380      | 657                                      | 1,527   | 1,621    | 1,531     | 2,746     | 2,478     | 2,445     | 2,104     | 1,815     | 3,780     | 2,084     | 1,592  |    |    |    |    |            |
| Ash                   | 74,481      | 8,696                                    | 12,292  | 10,909   | 7,291     | 8,434     | 6,452     | 6,441     | 3,937     | 2,686     | 6,802     | 541       | --     |    |    |    |    |            |
| Cottonwood            | 145,155     | 2,707                                    | 4,588   | 9,618    | 11,409    | 13,089    | 11,941    | 9,544     | 11,156    | 6,362     | 25,242    | 21,936    | 17,563 |    |    |    |    |            |
| Basswood              | 7,565       | 466                                      | 641     | 929      | 1,328     | 1,224     | 945       | 658       | 439       | 510       | 247       | 63        | 115    |    |    |    |    |            |
| Elm                   | 52,613      | 12,449                                   | 9,859   | 7,109    | 4,746     | 4,001     | 2,691     | 2,468     | 2,086     | 1,715     | 4,108     | 1,293     | 88     |    |    |    |    |            |
| Black walnut          | 68,747      | 9,982                                    | 8,417   | 12,767   | 11,299    | 9,683     | 7,058     | 4,238     | 2,123     | 1,879     | 827       | 474       | --     |    |    |    |    |            |
| Willow                | 15,402      | 783                                      | 1,190   | 1,472    | 2,520     | 2,611     | 1,898     | 1,792     | 1,485     | 634       | 893       | 4         | 120    |    |    |    |    |            |
| Boxelder              | 22,328      | 3,635                                    | 3,634   | 3,200    | 3,341     | 2,261     | 2,078     | 1,970     | 622       | 652       | 590       | 304       | 41     |    |    |    |    |            |
| Hackberry             | 104,831     | 10,607                                   | 12,300  | 13,297   | 13,423    | 12,380    | 12,255    | 9,010     | 6,749     | 4,775     | 6,389     | 3,646     | --     |    |    |    |    |            |
| Sycamore              | 22,924      | 272                                      | 836     | 813      | 1,226     | 1,219     | 2,592     | 1,746     | 1,644     | 2,268     | 4,017     | 4,414     | 1,877  |    |    |    |    |            |
| Other hardwoods       | 65,918      | 11,230                                   | 11,632  | 8,701    | 8,459     | 6,725     | 5,846     | 4,536     | 2,857     | 2,037     | 2,452     | 1,314     | 129    |    |    |    |    |            |
| Noncommercial species | 33,298      | 9,641                                    | 7,383   | 4,870    | 4,022     | 2,059     | 1,979     | 1,039     | 767       | 516       | 866       | 156       | --     |    |    |    |    |            |
| Total                 | 917,013     | 97,625                                   | 106,548 | 110,758  | 100,342   | 90,982    | 81,615    | 67,504    | 55,039    | 42,347    | 88,181    | 51,716    | 24,356 |    |    |    |    |            |
| All species           | 922,573     | 99,382                                   | 108,055 | 111,313  | 101,222   | 91,477    | 81,780    | 67,569    | 55,175    | 42,347    | 88,181    | 51,716    | 24,356 |    |    |    |    |            |

Table 39.--Net volume of timber on commercial forest land by  
class of timber and softwoods and hardwoods, Kansas, 1981

(In thousand cubic feet)

| Class of timber             | All<br>species | Softwoods    | Hardwoods      |
|-----------------------------|----------------|--------------|----------------|
| <b>LIVE TREES</b>           |                |              |                |
| Growing-stock trees         |                |              |                |
| Sawtimber                   |                |              |                |
| Saw log portion             | 392,254        | 1,762        | 390,492        |
| Upper stem portion          | 98,594         | 176          | 98,418         |
| Subtotal                    | 490,848        | 1,938        | 488,910        |
| Poletimber                  | 220,467        | 2,653        | 217,814        |
| <b>Total growing stock</b>  | <b>711,315</b> | <b>4,591</b> | <b>706,724</b> |
| <b>Cull trees</b>           |                |              |                |
| Rough and rotten cull trees |                |              |                |
| Sawtimber                   | 72,857         | 221          | 72,636         |
| Poletimber                  | 70,972         | 338          | 70,634         |
| Subtotal                    | 143,829        | 559          | 143,270        |
| Short-log trees             | 67,429         | 410          | 67,019         |
| <b>Total cull</b>           | <b>211,258</b> | <b>969</b>   | <b>210,289</b> |
| <b>TOTAL LIVE TREES</b>     | <b>922,573</b> | <b>5,560</b> | <b>917,013</b> |
| <b>SALVABLE DEAD TREES</b>  | <b>4,448</b>   | <b>68</b>    | <b>4,380</b>   |
| <b>ALL CLASSES</b>          | <b>927,021</b> | <b>5,628</b> | <b>921,393</b> |

Table 40.--Net volume of growing stock, sawtimber, short-log, and rough and rotten trees on commercial forest land by individual species, Kansas, 1981

| Species                                 | Total<br>all live | Growing<br>stock | Short-log<br>cull | Rough and<br>rotten cull | Sawtimber<br>Thousand<br>board feet <sup>1/</sup> |
|---|-------------------|------------------|-------------------|--------------------------|---|
| - - - - - Thousand cubic feet - - - - - |                   |                  |                   |                          |   |
| Eastern redcedar                        | 5,560             | 4,591            | 410               | 559                      | 10,871  |
| Bur oak                                 | 74,323            | 60,920           | 6,634             | 6,769                    | 286,120   |
| White oak                               | 2,988             | 2,663            | 243               | 82                       | 10,136  |
| Chinkapin oak                           | 48,354            | 31,458           | 4,632             | 12,264                   | 97,247  |
| Post oak                                | 23,758            | 19,854           | 1,787             | 2,117                    | 36,531  |
| Northern red oak                        | 50,034            | 45,152           | 1,723             | 3,159                    | 180,754   |
| Shumard oak                             | 819               | 676              | 32                | 111                      | 2,703   |
| Black oak                               | 21,214            | 18,536           | 977               | 1,701                    | 80,893  |
| Blackjack oak                           | 4,519             | 2,400            | 1,077             | 1,042                    | 3,827   |
| Pin oak                                 | 6,474             | 6,186            | 43                | 245                      | 33,378  |
| Shingle oak                             | 323               | 323              | --                | --                       | 567   |
| Shellbark hickory                       | 1,667             | 1,481            | 90                | 96                       | 2,936   |
| Mockernut hickory                       | 1,752             | 1,401            | 155               | 195                      | 5,741   |
| Shagbark hickory                        | 15,926            | 14,506           | 683               | 737                      | 34,370  |
| Bitternut hickory                       | 12,740            | 11,270           | 883               | 587                      | 23,281  |
| Black hickory                           | 505               | 423              | 51                | 31                       | 1,368   |
| Pecan                                   | 10,586            | 8,986            | 757               | 843                      | 28,043  |
| Sugar maple                             | 3,389             | 3,120            | 125               | 144                      | 6,280   |
| Silver maple                            | 24,380            | 21,011           | 1,078             | 2,291                    | 87,834  |
| White ash                               | 2,080             | 1,641            | 188               | 251                      | 4,191   |
| Green ash                               | 72,401            | 60,059           | 5,258             | 7,084                    | 181,569   |
| Eastern cottonwood                      | 145,155           | 134,292          | 4,011             | 6,852                    | 610,060   |
| American basswood                       | 7,565             | 6,031            | 734               | 800                      | 25,763  |
| American elm                            | 41,985            | 25,366           | 5,690             | 10,929                   | 59,400  |
| Siberian elm                            | 1,041             | 343              | 264               | 434                      | 271   |
| Slippery elm                            | 9,587             | 4,890            | 2,056             | 2,641                    | 9,860   |
| Black walnut                            | 68,747            | 57,868           | 5,495             | 5,384                    | 169,979   |
| Black willow                            | 15,402            | 11,629           | 821               | 2,952                    | 47,901  |
| Boxelder                                | 22,328            | 10,376           | 3,487             | 8,465                    | 22,839  |
| Hackberry                               | 104,831           | 86,674           | 9,118             | 9,039                    | 299,581   |
| American sycamore                       | 22,924            | 21,538           | 250               | 1,136                    | 105,631   |
| Black cherry                            | 1,936             | 1,250            | 366               | 320                      | 3,455   |
| Black locust                            | 4,357             | 2,636            | 627               | 1,094                    | 5,293   |
| Honeylocust                             | 27,648            | 16,555           | 3,739             | 7,354                    | 49,897  |
| Kentucky coffeetree                     | 6,771             | 5,389            | 424               | 958                      | 19,474  |
| Northern catalpa                        | 3,092             | 1,107            | 358               | 1,627                    | 2,151   |
| Common persimmon                        | 1,347             | 1,113            | 24                | 210                      | 612   |
| Red mulberry                            | 19,463            | 6,448            | 3,119             | 9,896                    | 11,575  |
| River birch                             | 818               | 781              | --                | 37                       | 2,278   |
| Sugarberry                              | 399               | 344              | --                | 55                       | 1,569   |
| Texas buckeye                           | 87                | 28               | 20                | 39                       | --  |
| All species <sup>2/</sup>               | 889,275           | 711,315          | 67,429            | 110,531                  | 2,566,229   |

<sup>1/</sup>International 1/4-inch rule.

<sup>2/</sup>These totals do not include volume for noncommercial species. Volumes for individual noncommercial species are found in Table 41.

Table 41.--Net volume of noncommercial species  
(nongrowing-stock volume) on commercial forest  
land by individual species, Kansas, 1981

(In thousand cubic feet)

| Species             | Nongrowing-stock<br>(rough tree) volume |
|---------------------|---|
| Ailanthus           | 136                                     |
| Eastern redbud      | 1,329                                   |
| Hawthorn            | 63                                      |
| Osage orange        | 30,970                                  |
| Eastern hophornbeam | 300                                     |
| All species         | 33,298                                  |

Table 42.--Net volume of growing stock on commercial forest land, by species group and Forest Survey Unit, Kansas, 1981

(In thousand cubic feet)

| Species group    | All<br>Units | Forest Survey Unit        |                           |                 |
|------------------|--------------|---------------------------|---------------------------|-----------------|
|                  |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS        |              |                           |                           |                 |
| Eastern redcedar | 4,591        | 2,446                     | 2,112                     | 33              |
| Total            | 4,591        | 2,446                     | 2,112                     | 33              |
| HARDWOODS        |              |                           |                           |                 |
| Bur oak          | 60,920       | 29,902                    | 15,644                    | 15,374          |
| Select white oak | 34,121       | 22,050                    | 12,071                    | --              |
| Other white oak  | 19,854       | 2,107                     | 17,747                    | --              |
| Select red oak   | 45,828       | 25,577                    | 20,251                    | --              |
| Other red oak    | 27,445       | 15,385                    | 12,060                    | --              |
| Select hickory   | 17,388       | 11,801                    | 5,587                     | --              |
| Other hickory    | 11,693       | 6,665                     | 5,028                     | --              |
| Pecan            | 8,986        | 265                       | 8,578                     | 143             |
| Hard maple       | 3,120        | 1,938                     | 1,182                     | --              |
| Soft maple       | 21,011       | 10,459                    | 10,552                    | --              |
| Ash              | 61,700       | 13,845                    | 26,734                    | 21,121          |
| Cottonwood       | 134,292      | 43,561                    | 9,786                     | 80,945          |
| Basswood         | 6,031        | 5,618                     | 413                       | --              |
| Elm              | 30,599       | 13,932                    | 12,589                    | 4,078           |
| Black walnut     | 57,868       | 32,366                    | 23,004                    | 2,498           |
| Willow           | 11,629       | 5,021                     | 4,204                     | 2,404           |
| Boxelder         | 10,376       | 3,563                     | 1,831                     | 4,982           |
| Hackberry        | 86,674       | 37,640                    | 38,441                    | 10,593          |
| Sycamore         | 21,538       | 11,447                    | 9,787                     | 304             |
| Other hardwoods  | 35,651       | 19,505                    | 11,527                    | 4,619           |
| Total            | 706,724      | 312,647                   | 247,016                   | 147,061         |
| All species      | 711,315      | 315,093                   | 249,128                   | 147,094         |

Table 43.--Net volume of sawtimber on commercial forest land, by species group and Forest Survey Unit, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| Species group    | All<br>Units | Forest Survey Unit        |                           |                 |
|------------------|--------------|---------------------------|---------------------------|-----------------|
|                  |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS        |              |                           |                           |                 |
| Eastern redcedar | 10,871       | 5,106                     | 5,765                     | --              |
| Total            | 10,871       | 5,106                     | 5,765                     | --              |
| HARDWOODS        |              |                           |                           |                 |
| Bur oak          | 286,120      | 124,290                   | 72,739                    | 89,091          |
| Select white oak | 107,383      | 77,476                    | 29,907                    | --              |
| Other white oak  | 36,531       | 6,145                     | 30,386                    | --              |
| Select red oak   | 183,457      | 104,284                   | 79,173                    | --              |
| Other red oak    | 118,665      | 70,133                    | 48,532                    | --              |
| Select hickory   | 43,047       | 24,060                    | 18,987                    | --              |
| Other hickory    | 24,649       | 14,453                    | 10,196                    | --              |
| Pecan            | 28,043       | 575                       | 26,708                    | 760             |
| Hard maple       | 6,280        | 3,635                     | 2,645                     | --              |
| Soft maple       | 87,834       | 44,464                    | 43,370                    | --              |
| Ash              | 185,760      | 42,154                    | 87,049                    | 56,557          |
| Cottonwood       | 610,060      | 196,103                   | 39,358                    | 374,599         |
| Basswood         | 25,763       | 24,807                    | 956                       | --              |
| Elm              | 69,531       | 25,507                    | 29,537                    | 14,487          |
| Black walnut     | 169,979      | 96,526                    | 65,992                    | 7,461           |
| Willow           | 47,901       | 19,065                    | 16,467                    | 12,369          |
| Boxelder         | 22,839       | 5,924                     | 6,077                     | 10,838          |
| Hackberry        | 299,581      | 112,814                   | 137,513                   | 49,254          |
| Sycamore         | 105,631      | 56,268                    | 47,653                    | 1,710           |
| Other hardwoods  | 96,304       | 53,824                    | 29,536                    | 12,944          |
| Total            | 2,555,358    | 1,102,507                 | 822,781                   | 630,070         |
| All species      | 2,566,229    | 1,107,613                 | 828,546                   | 630,070         |

<sup>1/</sup> International 1/4-inch rule.



Table 44.--Net volume of growing stock on commercial forest land by county and species group, Kansas, 1981

(In thousand cubic feet)

| NORTHEASTERN UNIT |             |                  |         |                  |                 |                |               |                |               |       |            |            |        |
|-------------------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|-------|------------|------------|--------|
| County            | All species | Species group    |         |                  |                 |                |               |                |               |       |            |            |        |
|                   |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan | Hard maple | Soft maple | Ash    |
| Atchison          | 15,257      | 154              | 1,511   | 1,319            | 125             | 1,558          | 670           | 459            | 305           | --    | 235        | 366        | 740    |
| Brown             | 10,457      | 132              | 985     | 1,194            | 118             | 1,372          | 558           | 421            | 266           | --    | 223        | 173        | 517    |
| Clay              | 10,580      | 49               | 1,053   | 471              | 24              | 562            | 221           | 182            | 144           | --    | 31         | 395        | 527    |
| Dickinson         | 9,597       | 54               | 867     | 423              | 23              | 722            | 223           | 179            | 134           | --    | 51         | 292        | 430    |
| Doniphan          | 14,275      | 148              | 1,477   | 1,110            | 99              | 1,607          | 598           | 526            | 266           | --    | 178        | 446        | 640    |
| Douglas           | 12,833      | 163              | 840     | 850              | 163             | 1,059          | 1,327         | 1,049          | 498           | --    | 18         | 310        | 287    |
| Franklin          | 11,661      | 121              | 996     | 789              | 116             | 935            | 917           | 772            | 377           | 86    | 14         | 391        | 395    |
| Geary             | 10,510      | 52               | 1,074   | 724              | 55              | 595            | 475           | 375            | 248           | --    | 7          | 352        | 438    |
| Jackson           | 12,804      | 76               | 1,314   | 707              | 46              | 883            | 194           | 316            | 150           | --    | 5          | 791        | 839    |
| Jefferson         | 21,868      | 170              | 1,607   | 1,437            | 215             | 1,615          | 2,061         | 1,391          | 713           | --    | 12         | 552        | 637    |
| Johnson           | 14,091      | 135              | 1,458   | 1,204            | 156             | 1,395          | 553           | 419            | 222           | --    | 188        | 453        | 665    |
| Leavenworth       | 28,197      | 92               | 2,572   | 1,689            | 145             | 1,789          | 2,187         | 1,038          | 642           | 75    | 2          | 872        | 1,076  |
| Marshall          | 13,713      | 108              | 1,391   | 837              | 44              | 1,031          | 331           | 373            | 192           | --    | 84         | 553        | 619    |
| Miami             | 25,539      | 242              | 2,645   | 2,281            | 180             | 2,563          | 964           | 776            | 458           | 64    | 379        | 844        | 1,324  |
| Memph             | 6,733       | 35               | 643     | 374              | 27              | 450            | 105           | 175            | 83            | --    | --         | 362        | 451    |
| Osage             | 17,114      | 125              | 1,615   | 1,229            | 109             | 1,290          | 794           | 652            | 379           | --    | 74         | 483        | 677    |
| Pottawatomie      | 22,350      | 190              | 2,040   | 1,496            | 149             | 1,630          | 1,141         | 911            | 492           | --    | 115        | 640        | 859    |
| Riley             | 16,697      | 161              | 1,648   | 1,133            | 97              | 1,386          | 713           | 653            | 357           | --    | 106        | 483        | 666    |
| Shawnee           | 13,618      | 98               | 1,346   | 971              | 56              | 1,142          | 362           | 382            | 254           | --    | 115        | 481        | 712    |
| Wabaunsee         | 17,097      | 78               | 1,734   | 1,030            | 70              | 939            | 597           | 454            | 316           | --    | 30         | 642        | 811    |
| Washington        | 5,949       | 29               | 715     | 375              | 18              | 402            | 134           | 134            | 94            | --    | --         | 453        | 370    |
| Wyandotte         | 4,153       | 34               | 371     | 407              | 72              | 652            | 260           | 164            | 75            | 40    | 71         | 125        | 165    |
| All counties      | 315,093     | 2,446            | 29,902  | 22,050           | 2,107           | 25,577         | 15,385        | 11,801         | 6,665         | 265   | 1,938      | 10,459     | 13,845 |
| SOUTHEASTERN UNIT |             |                  |         |                  |                 |                |               |                |               |       |            |            |        |
| Allen             | 5,884       | 36               | 523     | 119              | 111             | 276            | 150           | 86             | 105           | 180   | 6          | 351        | 709    |
| Anderson          | 7,855       | 76               | 597     | 262              | 392             | 519            | 274           | 157            | 130           | 283   | 21         | 376        | 829    |
| Bourbon           | 22,505      | 165              | 1,078   | 1,834            | 2,518           | 2,665          | 1,635         | 741            | 624           | 386   | 212        | 572        | 1,776  |
| Butler            | 13,210      | 56               | 777     | 269              | 141             | 584            | 350           | 207            | 180           | 676   | 5          | 863        | 2,132  |
| Chase             | 6,451       | 33               | 667     | 110              | 53              | 252            | 141           | 82             | 133           | 151   | 5          | 425        | 765    |
| Chautauqua        | 23,805      | 248              | 1,088   | 1,173            | 3,450           | 2,173          | 1,439         | 548            | 456           | 1,140 | 56         | 805        | 2,432  |
| Cherokee          | 10,615      | 113              | 511     | 437              | 1,033           | 743            | 595           | 170            | 173           | 662   | 30         | 399        | 1,289  |
| Coffey            | 4,132       | 66               | 218     | 198              | 390             | 277            | 248           | 75             | 65            | 241   | 19         | 112        | 369    |
| Cowley            | 17,562      | 67               | 1,148   | 427              | 330             | 954            | 406           | 435            | 272           | 502   | 13         | 1,150      | 2,392  |
| Crawford          | 13,088      | 110              | 1,047   | 516              | 539             | 1,018          | 388           | 217            | 220           | 398   | 56         | 630        | 1,490  |
| Elk               | 14,054      | 131              | 645     | 634              | 1,332           | 1,278          | 731           | 325            | 257           | 651   | 45         | 561        | 1,622  |
| Greenwood         | 13,017      | 102              | 1,240   | 265              | 341             | 541            | 352           | 153            | 223           | 412   | 13         | 651        | 1,382  |
| Labette           | 7,380       | 98               | 364     | 363              | 803             | 535            | 450           | 141            | 123           | 448   | 31         | 245        | 804    |
| Linn              | 30,993      | 308              | 2,022   | 2,369            | 1,882           | 3,385          | 1,946         | 779            | 860           | 645   | 355        | 1,027      | 2,713  |
| Lyon              | 8,015       | 24               | 699     | 210              | 103             | 405            | 183           | 204            | 148           | 109   | 11         | 507        | 964    |
| Marion            | 4,533       | 23               | 238     | 126              | 158             | 292            | 124           | 111            | 62            | 213   | 3          | 269        | 660    |
| Montgomery        | 13,509      | 176              | 959     | 932              | 863             | 1,289          | 710           | 361            | 290           | 319   | 136        | 487        | 1,196  |
| Morris            | 4,669       | 29               | 405     | 143              | 117             | 284            | 92            | 108            | 78            | 81    | 12         | 276        | 531    |
| Neosho            | 6,724       | 70               | 327     | 302              | 755             | 491            | 393           | 123            | 117           | 387   | 18         | 233        | 750    |
| Wilson            | 15,578      | 103              | 801     | 1,111            | 1,849           | 1,698          | 1,106         | 462            | 419           | 374   | 113        | 449        | 1,394  |
| Woodson           | 5,549       | 78               | 285     | 266              | 587             | 392            | 337           | 102            | 93            | 320   | 22         | 164        | 535    |
| All counties      | 249,128     | 2,112            | 15,644  | 12,071           | 17,747          | 20,251         | 12,060        | 5,587          | 5,028         | 8,578 | 1,182      | 10,552     | 26,734 |

Table 44 continued on next page

(Table 44 continued on next page)

(Table 44 continued)

| NORTHEASTERN UNIT |               |           |        |              |        |          |           |          |                 |
|-------------------|---------------|-----------|--------|--------------|--------|----------|-----------|----------|-----------------|
| County            | Species group |           |        |              |        |          |           |          |                 |
|                   | Cotton-wood   | Bass-wood | Elm    | Black walnut | Willow | Boxelder | Hackberry | Sycamore | Other hardwoods |
| Atchison          | 1,792         | 299       | 529    | 1,430        | 151    | 133      | 2,112     | 614      | 755             |
| Brown             | 517           | 168       | 345    | 1,075        | 90     | 130      | 1,177     | 420      | 576             |
| Clay              | 2,301         | 219       | 381    | 956          | 175    | 100      | 1,745     | 481      | 563             |
| Dickinson         | 2,061         | 211       | 348    | 864          | 194    | 95       | 1,509     | 473      | 444             |
| Doniphan          | 1,307         | 344       | 533    | 1,568        | 222    | 165      | 1,740     | 446      | 855             |
| Douglas           | 967           | 206       | 809    | 1,430        | 318    | 128      | 1,111     | 444      | 856             |
| Franklin          | 1,016         | 180       | 626    | 1,383        | 159    | 132      | 1,091     | 319      | 846             |
| Geary             | 1,790         | 170       | 447    | 1,164        | 115    | 69       | 1,333     | 363      | 664             |
| Jackson           | 2,022         | 132       | 637    | 1,298        | 205    | 334      | 1,447     | 133      | 1,275           |
| Jefferson         | 2,910         | 295       | 1,238  | 2,453        | 332    | 164      | 1,788     | 900      | 1,378           |
| Johnson           | 1,326         | 341       | 545    | 1,418        | 175    | 173      | 1,924     | 584      | 757             |
| Leavenworth       | 6,126         | 326       | 1,468  | 2,924        | 169    | 127      | 1,994     | 1,232    | 1,652           |
| Marshall          | 2,060         | 300       | 650    | 1,335        | 396    | 221      | 1,812     | 485      | 891             |
| Miami             | 2,347         | 560       | 963    | 2,517        | 252    | 318      | 3,476     | 972      | 1,414           |
| Nemaha            | 1,123         | 69        | 310    | 708          | 97     | 195      | 774       | 60       | 692             |
| Osage             | 2,446         | 268       | 737    | 1,780        | 423    | 181      | 2,158     | 712      | 982             |
| Pottawatomie      | 2,993         | 440       | 941    | 2,167        | 673    | 262      | 3,085     | 881      | 1,245           |
| Riley             | 2,292         | 344       | 699    | 1,693        | 287    | 187      | 2,149     | 615      | 1,028           |
| Shawnee           | 1,896         | 284       | 517    | 1,357        | 260    | 179      | 1,862     | 458      | 886             |
| Wabaunsee         | 3,296         | 273       | 751    | 1,725        | 231    | 157      | 2,274     | 621      | 1,068           |
| Washington        | 871           | 49        | 318    | 629          | 62     | 88       | 619       | 95       | 494             |
| Wyandotte         | 102           | 140       | 140    | 492          | 35     | 25       | 460       | 139      | 184             |
| All counties      | 43,561        | 5,618     | 13,932 | 32,366       | 5,021  | 3,563    | 37,640    | 11,447   | 19,505          |
| SOUTHEASTERN UNIT |               |           |        |              |        |          |           |          |                 |
| Allen             | 347           | 4         | 263    | 530          | 134    | 54       | 1,334     | 259      | 302             |
| Anderson          | 392           | 8         | 394    | 731          | 148    | 65       | 1,491     | 302      | 408             |
| Bourbon           | 440           | 59        | 1,089  | 2,022        | 129    | 165      | 2,682     | 794      | 919             |
| Butler            | 701           | 7         | 775    | 1,197        | 401    | 107      | 2,297     | 709      | 676             |
| Chase             | 377           | 3         | 233    | 527          | 142    | 56       | 1,659     | 296      | 341             |
| Chautauqua        | 563           | 64        | 1,358  | 2,240        | 359    | 104      | 2,221     | 774      | 1,114           |
| Cherokee          | 540           | 25        | 648    | 1,115        | 265    | 42       | 1,033     | 348      | 444             |
| Coffey            | 264           | 12        | 252    | 492          | 93     | 20       | 445       | 103      | 173             |
| Cowley            | 617           | 8         | 973    | 1,517        | 379    | 219      | 3,797     | 992      | 964             |
| Crawford          | 689           | 9         | 606    | 1,178        | 254    | 111      | 2,490     | 541      | 581             |
| Elk               | 490           | 25        | 817    | 1,308        | 254    | 82       | 1,611     | 529      | 726             |
| Greenwood         | 1,005         | 12        | 605    | 1,231        | 299    | 125      | 2,847     | 469      | 639             |
| Labette           | 315           | 19        | 435    | 801          | 160    | 27       | 696       | 223      | 299             |
| Linn              | 1,109         | 54        | 1,221  | 2,723        | 320    | 156      | 4,720     | 1,101    | 1,298           |
| Lyon              | 289           | 4         | 370    | 658          | 135    | 122      | 1,998     | 441      | 431             |
| Marion            | 177           | 3         | 278    | 397          | 112    | 44       | 758       | 236      | 249             |
| Montgomery        | 349           | 19        | 571    | 1,244        | 141    | 114      | 2,250     | 532      | 571             |
| Morris            | 183           | 2         | 208    | 396          | 80     | 60       | 1,107     | 238      | 234             |
| Neosho            | 313           | 18        | 404    | 710          | 149    | 28       | 652       | 209      | 275             |
| Wilson            | 322           | 42        | 753    | 1,368        | 130    | 105      | 1,784     | 541      | 654             |
| Woodson           | 304           | 16        | 336    | 619          | 120    | 25       | 569       | 150      | 229             |
| All counties      | 9,786         | 413       | 12,589 | 23,004       | 4,204  | 1,831    | 38,441    | 9,787    | 11,527          |

(Table 44 continued on next page)

(Table 44 continued)

| County    | WESTERN UNIT  |           |     |              |        |          |           |          |                 |
|-----------|---------------|-----------|-----|--------------|--------|----------|-----------|----------|-----------------|
|           | Species group |           |     |              |        |          |           |          |                 |
|           | Cotton-wood   | Bass-wood | Elm | Black walnut | Willow | Boxelder | Hackberry | Sycamore | Other hardwoods |
| Barber    | 3,560         | --        | 134 | 73           | 99     | 186      | 400       | 5        | 151             |
| Barton    | 360           | --        | 25  | 18           | 24     | 42       | 92        | --       | 28              |
| Cheyenne  | 1,072         | --        | 66  | 37           | 44     | 92       | 206       | 3        | 64              |
| Clark     | 2,782         | --        | 49  | 35           | 39     | 92       | 223       | --       | 57              |
| Cloud     | 4,360         | --        | 273 | 180          | 132    | 257      | 676       | 20       | 275             |
| Comanche  | 259           | --        | 15  | 10           | 11     | 37       | 49        | --       | 16              |
| Decatur   | 684           | --        | 51  | 30           | 41     | 71       | 164       | 1        | 54              |
| Edwards   | 1,228         | --        | 63  | 11           | 17     | 29       | 61        | --       | 23              |
| Ellis     | 878           | --        | 60  | 43           | 54     | 90       | 196       | 1        | 73              |
| Ellsworth | 1,157         | --        | 77  | 52           | 45     | 97       | 252       | 8        | 92              |
| Finney    | 84            | --        | 5   | --           | 3      | 7        | 18        | --       | 3               |
| Ford      | 146           | --        | 12  | 7            | 8      | 27       | 24        | --       | 12              |
| Gove      | 58            | --        | 3   | 4            | 3      | 6        | 14        | --       | 4               |
| Graham    | 1,723         | --        | 111 | 63           | 74     | 148      | 318       | 7        | 122             |
| Grant     | 46            | --        | --  | 3            | --     | 7        | --        | --       | 2               |
| Gray      | 1,008         | --        | 8   | --           | 5      | 11       | 26        | --       | 4               |
| Greeley   | 20            | --        | --  | --           | --     | --       | --        | --       | --              |
| Hamilton  | 700           | --        | 43  | 10           | 32     | 72       | 161       | --       | 34              |
| Harper    | 2,040         | --        | 96  | 80           | 73     | 143      | 248       | 8        | 141             |
| Harvey    | 516           | --        | 40  | 7            | 24     | 54       | 76        | --       | 29              |
| Haskell   | --            | --        | --  | --           | --     | --       | --        | --       | --              |
| Hodgeman  | --            | --        | --  | --           | --     | --       | --        | --       | --              |
| Jewell    | 3,377         | --        | 156 | 70           | 124    | 221      | 536       | 1        | 155             |
| Kearny    | 226           | --        | --  | --           | --     | --       | 20        | --       | --              |
| Kingman   | 3,691         | --        | 168 | 158          | 108    | 224      | 329       | 20       | 270             |
| Kiowa     | 135           | --        | 5   | --           | 3      | 5        | 19        | --       | 3               |
| Lane      | 15            | --        | 2   | --           | 2      | 2        | 5         | --       | 1               |
| Lincoln   | 1,273         | --        | 72  | 55           | 51     | 111      | 218       | 3        | 81              |
| Logan     | 263           | --        | 21  | 12           | 15     | 26       | 56        | 1        | 25              |
| McPherson | 2,068         | --        | 94  | 61           | 54     | 111      | 243       | 4        | 91              |
| Meade     | 752           | --        | 27  | 18           | 20     | 40       | 101       | --       | 26              |
| Mitchell  | 2,785         | --        | 157 | 136          | 85     | 233      | 403       | 24       | 243             |
| Morton    | 647           | --        | 40  | 14           | 32     | 52       | 115       | --       | 37              |
| Ness      | 126           | --        | 13  | 7            | 3      | 10       | 33        | 3        | 16              |
| Norton    | 786           | --        | 72  | 27           | 48     | 90       | 179       | 3        | 68              |
| Osborne   | 2,810         | --        | 155 | 87           | 91     | 183      | 436       | 16       | 185             |
| Ottawa    | 2,565         | --        | 154 | 131          | 99     | 195      | 427       | 24       | 247             |
| Pawnee    | 774           | --        | 28  | 13           | 20     | 47       | 93        | --       | 27              |
| Phillips  | 2,168         | --        | 111 | 95           | 100    | 203      | 307       | 3        | 154             |
| Pratt     | 1,075         | --        | 39  | 18           | 21     | 38       | 86        | --       | 28              |
| Rawlins   | 637           | --        | 49  | 31           | 37     | 66       | 159       | 3        | 56              |
| Reno      | 2,960         | --        | 137 | 121          | 89     | 191      | 290       | 17       | 220             |
| Republic  | 3,743         | --        | 166 | 60           | 106    | 180      | 440       | 1        | 132             |
| Rice      | 1,363         | --        | 39  | 14           | 10     | 28       | 57        | 3        | 30              |
| Rooks     | 3,250         | --        | 136 | 78           | 82     | 183      | 363       | 12       | 165             |
| Rush      | 30            | --        | 5   | --           | 3      | 5        | 9         | --       | 3               |
| Russell   | 1,990         | --        | 115 | 67           | 67     | 124      | 319       | 7        | 112             |

(Table 44 continued on next page)

(Table 44 continued)

| WESTERN UNIT |                 |               |        |                 |        |          |           |          |                    |
|--------------|-----------------|---------------|--------|-----------------|--------|----------|-----------|----------|--------------------|
| County       | Species group   |               |        |                 |        |          |           |          |                    |
|              | Cotton-<br>wood | Bass-<br>wood | Elm    | Black<br>walnut | Willow | Boxelder | Hackberry | Sycamore | Other<br>hardwoods |
| Saline       | 1,152           | --            | 87     | 60              | 46     | 105      | 237       | 8        | 99                 |
| Scott        | 33              | --            | 5      | 2               | --     | 2        | 10        | 1        | 6                  |
| Sedgwick     | 2,615           | --            | 166    | 140             | 86     | 206      | 396       | 31       | 271                |
| Seward       | 850             | --            | 36     | 34              | 37     | 66       | 131       | --       | 49                 |
| Sheridan     | 564             | --            | 25     | 19              | 21     | 35       | 79        | 1        | 33                 |
| Sherman      | --              | --            | --     | --              | --     | --       | --        | --       | --                 |
| Smith        | 1,187           | --            | 79     | 39              | 66     | 112      | 250       | --       | 77                 |
| Stafford     | 3,371           | --            | 59     | 21              | 21     | 50       | 78        | --       | 40                 |
| Stanton      | 10              | --            | --     | --              | --     | --       | --        | --       | --                 |
| Stevens      | 177             | --            | 16     | 7               | 13     | 21       | 47        | --       | 15                 |
| Sumner       | 7,845           | --            | 481    | 212             | 98     | 291      | 833       | 61       | 421                |
| Thomas       | 458             | --            | 3      | 4               | 3      | 6        | 14        | --       | 6                  |
| Trego        | 456             | --            | 29     | 21              | 15     | 45       | 71        | 4        | 41                 |
| Wallace      | 37              | --            | --     | 3               | --     | 7        | --        | --       | 2                  |
| Wichita      | --              | --            | --     | --              | --     | --       | --        | --       | --                 |
| All counties | 80,945          | --            | 4,078  | 2,498           | 2,404  | 4,982    | 10,593    | 304      | 4,619              |
| All units    | 134,292         | 6,031         | 30,599 | 57,868          | 11,629 | 10,376   | 86,674    | 21,538   | 35,651             |

(Table 44 continued)

| County    | All species | Species group    |         |                  |                 |                |               |                |               |       |            |            |       |
|-----------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|-------|------------|------------|-------|
|           |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan | Hard maple | Soft maple | Ash   |
| Barber    | 5,798       | --               | 558     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 627   |
| Barton    | 855         | --               | 114     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 150   |
| Cheyenne  | 2,113       | --               | 262     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 263   |
| Clark     | 4,229       | --               | 149     | --               | --              | --             | --            | --             | --            | 3     | --         | --         | 800   |
| Cloud     | 7,899       | --               | 1,037   | --               | --              | --             | --            | --             | --            | 13    | --         | --         | 676   |
| Comanche  | 668         | --               | 51      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 220   |
| Decatur   | 1,530       | --               | 223     | --               | --              | --             | --            | --             | --            | 3     | --         | --         | 208   |
| Edwards   | 1,617       | --               | 81      | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 103   |
| Ellis     | 1,928       | --               | 261     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 268   |
| Ellsworth | 2,442       | --               | 374     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 284   |
| Finney    | 208         | --               | 14      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 74    |
| Ford      | 381         | --               | 34      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 111   |
| Gove      | 120         | --               | 17      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 11    |
| Graham    | 3,525       | --               | 459     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 495   |
| Grant     | 85          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 27    |
| Gray      | 1,218       | --               | 21      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 135   |
| Greeley   | 20          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Hamilton  | 1,941       | 5                | 135     | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 747   |
| Harper    | 3,860       | --               | 352     | --               | --              | --             | --            | --             | --            | 3     | --         | --         | 676   |
| Harvey    | 1,095       | --               | 108     | --               | --              | --             | --            | --             | --            | --    | --         | --         | 241   |
| Haskell   | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Hodgeman  | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Jewell    | 6,180       | --               | 545     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 990   |
| Kearny    | 253         | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 7     |
| Kingman   | 6,627       | --               | 557     | --               | --              | --             | --            | --             | --            | 3     | --         | --         | 1,099 |
| Kiowa     | 216         | 6                | 13      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 27    |
| Lane      | 46          | --               | 7       | --               | --              | --             | --            | --             | --            | --    | --         | --         | 12    |
| Lincoln   | 2,458       | --               | 295     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 305   |
| Logan     | 609         | 6                | 85      | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 98    |
| McPherson | 3,343       | --               | 327     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 285   |
| Meade     | 1,351       | --               | 82      | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 283   |
| Mitchell  | 5,774       | --               | 718     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 986   |
| Morton    | 1,330       | 5                | 124     | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 263   |
| Ness      | 323         | --               | 68      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 44    |
| Norton    | 1,896       | --               | 266     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 355   |
| Osborne   | 5,340       | --               | 714     | --               | --              | --             | --            | --             | --            | 6     | --         | --         | 657   |
| Ottawa    | 5,508       | --               | 732     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 929   |
| Pawnee    | 1,281       | --               | 93      | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 185   |
| Phillips  | 4,309       | --               | 399     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 764   |
| Pratt     | 1,540       | --               | 103     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 130   |
| Rawlins   | 1,464       | --               | 228     | --               | --              | --             | --            | --             | --            | 3     | --         | --         | 195   |
| Reno      | 5,517       | --               | 512     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 978   |
| Republic  | 6,082       | --               | 498     | --               | --              | --             | --            | --             | --            | 5     | --         | --         | 751   |
| Rice      | 1,749       | --               | 99      | --               | --              | --             | --            | --             | --            | 1     | --         | --         | 105   |
| Rooks     | 5,653       | --               | 553     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 827   |
| Rush      | 91          | --               | 13      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 23    |
| Russell   | 3,598       | --               | 451     | --               | --              | --             | --            | --             | --            | 6     | --         | --         | 340   |

WESTERN UNIT

(Table 44 continued on next page)

(Table 44 continued on next page)

(Table 44 continued)

| County       | All species | WESTERN UNIT     |         |                  |                 |                |               |                |               |       |            | Species group |        |  |  |  |
|--------------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|-------|------------|---------------|--------|--|--|--|
|              |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan | Hard maple | Soft maple    | Ash    |  |  |  |
| Saline       | 2,507       | --               | 379     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 334    |  |  |  |
| Scott        | 102         | --               | 26      | --               | --              | --             | --            | --             | --            | --    | --         | --            | 17     |  |  |  |
| Sedgwick     | 5,687       | --               | 785     | --               | --              | --             | --            | --             | --            | 44    | --         | --            | 947    |  |  |  |
| Seward       | 1,565       | --               | 138     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 224    |  |  |  |
| Sheridan     | 997         | --               | 113     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 107    |  |  |  |
| Sherman      | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --            | --     |  |  |  |
| Smith        | 2,513       | --               | 315     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 398    |  |  |  |
| Stafford     | 3,904       | 10               | 101     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 153    |  |  |  |
| Stanton      | 10          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --            | --     |  |  |  |
| Stevens      | 425         | --               | 61      | --               | --              | --             | --            | --             | --            | --    | --         | --            | 68     |  |  |  |
| Sumner       | 13,787      | --               | 1,596   | --               | --              | --             | --            | --             | --            | 99    | --         | --            | 1,850  |  |  |  |
| Thomas       | 522         | --               | 17      | --               | --              | --             | --            | --             | --            | --    | --         | --            | 11     |  |  |  |
| Trego        | 1,044       | --               | 121     | --               | --              | --             | --            | --             | --            | --    | --         | --            | 241    |  |  |  |
| Wallace      | 76          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --            | 27     |  |  |  |
| Wichita      | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --            | --     |  |  |  |
| All counties | 147,094     | 33               | 15,374  | --               | --              | --             | --            | --             | --            | 143   | --         | --            | 21,121 |  |  |  |
| All units    | 711,315     | 4,591            | 60,920  | 34,121           | 19,854          | 45,828         | 27,445        | 17,388         | 11,693        | 8,986 | 3,120      | 21,011        | 61,700 |  |  |  |

(Table 44 continued on next page)

Table 45.--Net volume of sawtimber on commercial forest land by county and species group, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| NORTHEASTERN UNIT |             |                  |         |                  |                 |                |               |                |               |       |            |            |        |
|-------------------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|-------|------------|------------|--------|
| County            | All species | Species group    |         |                  |                 |                |               |                |               |       |            |            |        |
|                   |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan | Hard maple | Soft maple | Ash    |
| Atchison          | 54,573      | 366              | 6,083   | 4,934            | 246             | 6,233          | 2,964         | 1,196          | 864           | --    | 417        | 1,463      | 2,252  |
| Brown             | 36,117      | 296              | 3,781   | 4,463            | 227             | 5,619          | 2,541         | 1,116          | 748           | --    | 381        | 759        | 1,636  |
| Clay              | 39,325      | 118              | 4,730   | 1,806            | 64              | 2,107          | 907           | 489            | 343           | --    | 81         | 1,472      | 1,610  |
| Dickinson         | 35,993      | 132              | 3,752   | 1,524            | 52              | 2,929          | 859           | 554            | 492           | --    | 114        | 1,087      | 1,242  |
| Doniphan          | 49,986      | 295              | 6,220   | 3,694            | 251             | 6,603          | 2,704         | 1,382          | 1,029         | --    | 351        | 1,833      | 1,882  |
| Douglas           | 42,640      | 268              | 3,111   | 2,890            | 629             | 5,120          | 6,583         | 1,467          | 667           | --    | --         | 1,455      | 515    |
| Franklin          | 38,529      | 214              | 3,949   | 2,634            | 439             | 4,205          | 4,534         | 1,133          | 508           | 184   | --         | 1,817      | 1,076  |
| Geary             | 36,690      | 108              | 4,473   | 2,523            | 177             | 2,373          | 2,238         | 687            | 428           | --    | 14         | 1,446      | 1,315  |
| Jackson           | 43,704      | 185              | 5,918   | 1,928            | 229             | 2,659          | 956           | 405            | 82            | --    | 4          | 3,744      | 2,978  |
| Jefferson         | 74,959      | 276              | 5,903   | 5,037            | 786             | 7,190          | 9,657         | 2,127          | 1,015         | --    | --         | 2,506      | 1,541  |
| Johnson           | 49,515      | 290              | 6,286   | 4,305            | 329             | 5,781          | 2,376         | 1,227          | 735           | --    | 376        | 1,715      | 2,033  |
| Leavenworth       | 102,048     | 172              | 9,657   | 6,143            | 418             | 7,288          | 9,004         | 1,838          | 1,027         | 161   | --         | 4,046      | 3,276  |
| Marshall          | 48,596      | 205              | 6,316   | 2,969            | 128             | 4,300          | 1,532         | 955            | 503           | --    | 194        | 2,237      | 1,939  |
| Miami             | 90,212      | 560              | 11,131  | 8,514            | 362             | 10,300         | 4,383         | 2,243          | 1,508         | 138   | 738        | 3,393      | 4,267  |
| Nemaha            | 23,062      | 75               | 2,941   | 980              | 141             | 1,453          | 509           | 198            | 17            | --    | --         | 1,626      | 1,473  |
| Osage             | 59,394      | 268              | 6,721   | 4,320            | 329             | 4,948          | 3,717         | 1,256          | 642           | --    | 112        | 2,018      | 2,002  |
| Pottawatomie      | 78,642      | 399              | 8,642   | 5,317            | 481             | 6,792          | 5,365         | 1,686          | 971           | --    | 204        | 2,538      | 2,394  |
| Riley             | 58,691      | 316              | 7,011   | 3,953            | 292             | 5,651          | 3,327         | 1,290          | 730           | --    | 180        | 1,940      | 1,856  |
| Shawnee           | 48,657      | 209              | 5,842   | 3,476            | 130             | 4,536          | 1,612         | 1,095          | 926           | --    | 241        | 1,933      | 2,320  |
| Wabaunsee         | 60,783      | 181              | 7,414   | 3,715            | 208             | 3,554          | 2,678         | 901            | 514           | --    | 66         | 2,649      | 2,565  |
| Washington        | 20,775      | 95               | 3,039   | 1,239            | 60              | 1,740          | 626           | 236            | 114           | --    | --         | 2,285      | 1,535  |
| Wyandotte         | 14,722      | 78               | 1,370   | 1,112            | 167             | 2,903          | 1,061         | 579            | 590           | 92    | 162        | 502        | 447    |
| All counties      | 1,107,613   | 5,106            | 124,290 | 77,476           | 6,145           | 104,284        | 70,133        | 24,060         | 14,453        | 575   | 3,635      | 44,464     | 42,154 |

| SOUTHEASTERN UNIT |         |       |        |        |        |        |        |        |        |        |       |        |        |
|-------------------|---------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|
| Allen             | 21,738  | 92    | 2,647  | 362    | 152    | 1,042  | 633    | 328    | 307    | 573    | 16    | 1,596  | 2,344  |
| Anderson          | 27,000  | 249   | 2,891  | 752    | 514    | 2,036  | 1,000  | 575    | 343    | 896    | 55    | 1,640  | 2,647  |
| Bourbon           | 71,539  | 396   | 4,404  | 4,255  | 4,524  | 10,508 | 7,495  | 2,413  | 937    | 1,433  | 440   | 1,998  | 5,348  |
| Butler            | 46,894  | 105   | 4,001  | 758    | 294    | 2,578  | 1,380  | 895    | 384    | 1,648  | 11    | 3,518  | 7,694  |
| Chase             | 24,968  | 63    | 3,390  | 345    | 122    | 911    | 711    | 265    | 419    | 504    | 11    | 2,034  | 2,512  |
| Chautauqua        | 67,063  | 624   | 4,452  | 3,105  | 5,223  | 8,925  | 3,804  | 1,537  | 737    | 3,158  | 153   | 3,066  | 7,863  |
| Cherokee          | 31,617  | 362   | 2,188  | 1,184  | 1,572  | 3,006  | 1,708  | 468    | 322    | 2,013  | 83    | 1,500  | 4,260  |
| Coffey            | 12,314  | 226   | 901    | 556    | 627    | 1,114  | 768    | 202    | 153    | 896    | 52    | 388    | 1,080  |
| Cowley            | 63,884  | 145   | 5,837  | 1,120  | 561    | 3,509  | 1,605  | 2,083  | 602    | 1,349  | 33    | 4,610  | 8,511  |
| Crawford          | 46,381  | 279   | 5,111  | 1,182  | 961    | 3,925  | 1,734  | 753    | 597    | 1,234  | 115   | 2,797  | 4,666  |
| Elk               | 43,253  | 309   | 2,979  | 1,669  | 2,117  | 5,170  | 2,539  | 1,066  | 400    | 1,562  | 104   | 2,154  | 5,507  |
| Greenwood         | 46,996  | 261   | 6,025  | 886    | 418    | 2,550  | 1,526  | 471    | 703    | 1,501  | 34    | 2,976  | 4,171  |
| Labette           | 21,649  | 341   | 1,531  | 976    | 1,234  | 2,145  | 1,282  | 398    | 235    | 1,455  | 88    | 920    | 2,606  |
| Linn              | 108,858 | 872   | 9,424  | 5,203  | 4,319  | 12,957 | 10,506 | 2,409  | 1,684  | 2,443  | 741   | 4,601  | 8,340  |
| Lyon              | 30,369  | 39    | 3,492  | 564    | 220    | 1,461  | 919    | 923    | 364    | 368    | 24    | 2,128  | 3,303  |
| Marion            | 15,386  | 64    | 1,188  | 360    | 241    | 1,113  | 406    | 428    | 114    | 497    | 7     | 1,048  | 2,352  |
| Montgomery        | 46,711  | 572   | 4,488  | 2,014  | 1,877  | 4,805  | 3,312  | 1,327  | 634    | 1,311  | 303   | 2,067  | 3,686  |
| Morris            | 17,333  | 68    | 2,024  | 357    | 241    | 1,035  | 413    | 441    | 222    | 283    | 24    | 1,192  | 1,731  |
| Neosho            | 19,572  | 223   | 1,361  | 830    | 1,129  | 1,999  | 1,102  | 317    | 217    | 1,211  | 52    | 868    | 2,412  |
| Wilson            | 43,604  | 208   | 3,327  | 2,699  | 3,127  | 6,802  | 4,691  | 1,408  | 625    | 1,148  | 236   | 1,683  | 4,392  |
| Woodson           | 16,317  | 266   | 1,178  | 730    | 913    | 1,582  | 998    | 280    | 197    | 1,125  | 63    | 586    | 1,624  |
| All counties      | 828,546 | 5,765 | 72,739 | 29,907 | 30,386 | 79,173 | 48,532 | 18,987 | 10,196 | 26,708 | 2,645 | 43,370 | 87,049 |

(Table 45 continued on next page.)

(Table 45 continued on next page)

<sup>1/</sup>International 1/4-inch rule.

(Table 45 continued)

| NORTHEASTERN UNIT |                 |               |        |                 |        |          |           |          |                    |
|-------------------|-----------------|---------------|--------|-----------------|--------|----------|-----------|----------|--------------------|
| County            | Species group   |               |        |                 |        |          |           |          |                    |
|                   | Cotton-<br>wood | Bass-<br>wood | Elm    | Black<br>walnut | Willow | Boxelder | Hackberry | Sycamore | Other<br>hardwoods |
| Atchison          | 8,305           | 1,335         | 1,073  | 4,589           | 510    | 129      | 6,462     | 2,993    | 2,159              |
| Brown             | 2,220           | 708           | 592    | 3,191           | 395    | 160      | 3,475     | 2,047    | 1,762              |
| Clay              | 10,634          | 1,048         | 838    | 3,097           | 568    | 124      | 5,475     | 2,264    | 1,550              |
| Dickinson         | 9,590           | 986           | 755    | 2,930           | 713    | 64       | 4,716     | 2,183    | 1,319              |
| Doniphan          | 5,429           | 1,536         | 1,000  | 5,042           | 622    | 269      | 5,271     | 2,130    | 2,443              |
| Douglas           | 4,079           | 850           | 1,519  | 3,784           | 1,535  | 177      | 3,242     | 2,333    | 2,416              |
| Franklin          | 4,187           | 738           | 1,125  | 3,725           | 748    | 262      | 3,174     | 1,674    | 2,203              |
| Geary             | 7,606           | 717           | 905    | 3,527           | 407    | 112      | 4,036     | 1,780    | 1,818              |
| Jackson           | 9,697           | 662           | 940    | 3,475           | 904    | 900      | 4,132     | 730      | 3,176              |
| Jefferson         | 13,421          | 1,140         | 2,174  | 6,745           | 1,530  | 269      | 5,049     | 4,673    | 3,920              |
| Johnson           | 5,521           | 1,579         | 1,185  | 4,368           | 499    | 174      | 5,960     | 2,643    | 2,133              |
| Leavenworth       | 29,964          | 1,152         | 2,003  | 8,475           | 612    | 258      | 5,490     | 6,509    | 4,555              |
| Marshall          | 8,787           | 1,409         | 1,135  | 4,078           | 1,240  | 311      | 5,486     | 2,309    | 2,563              |
| Miami             | 10,034          | 2,567         | 1,742  | 7,787           | 813    | 377      | 10,601    | 4,735    | 4,019              |
| Nemaha            | 5,519           | 362           | 512    | 1,893           | 472    | 549      | 2,280     | 326      | 1,736              |
| Osage             | 10,789          | 1,164         | 1,521  | 5,255           | 1,646  | 307      | 6,399     | 3,382    | 2,598              |
| Pottawatomie      | 13,621          | 1,999         | 1,929  | 6,478           | 2,506  | 415      | 9,320     | 4,270    | 3,315              |
| Riley             | 10,314          | 1,541         | 1,304  | 5,157           | 1,165  | 251      | 6,633     | 2,956    | 2,824              |
| Shawnee           | 8,034           | 1,299         | 969    | 4,207           | 969    | 299      | 5,732     | 2,197    | 2,631              |
| Wabaunsee         | 14,466          | 1,211         | 1,537  | 5,214           | 798    | 285      | 6,916     | 3,039    | 2,872              |
| Washington        | 3,657           | 190           | 374    | 1,729           | 293    | 210      | 1,614     | 535      | 1,204              |
| Wyandotte         | 229             | 614           | 375    | 1,780           | 120    | 22       | 1,351     | 560      | 608                |
| All counties      | 196,103         | 24,807        | 25,507 | 96,526          | 19,065 | 5,924    | 112,814   | 56,268   | 53,824             |
| SOUTHEASTERN UNIT |                 |               |        |                 |        |          |           |          |                    |
| Allen             | 1,341           | 2             | 671    | 1,702           | 488    | 154      | 5,200     | 1,362    | 726                |
| Anderson          | 1,522           | 12            | 934    | 2,105           | 547    | 202      | 5,656     | 1,556    | 868                |
| Bourbon           | 1,935           | 216           | 2,500  | 5,887           | 525    | 619      | 9,119     | 3,674    | 2,913              |
| Butler            | 2,854           | 1             | 1,822  | 3,558           | 1,661  | 362      | 8,109     | 3,475    | 1,786              |
| Chase             | 1,457           | 1             | 625    | 1,875           | 512    | 135      | 6,649     | 1,590    | 837                |
| Chautauqua        | 2,431           | 36            | 2,892  | 5,139           | 1,560  | 348      | 6,307     | 3,451    | 2,252              |
| Cherokee          | 2,096           | 15            | 1,453  | 2,755           | 1,028  | 137      | 3,009     | 1,512    | 946                |
| Coffey            | 954             | 9             | 615    | 1,213           | 303    | 67       | 1,405     | 452      | 333                |
| Cowley            | 2,551           | 8             | 2,628  | 4,781           | 1,581  | 778      | 13,720    | 5,130    | 2,741              |
| Crawford          | 2,697           | 21            | 1,405  | 3,774           | 934    | 346      | 9,595     | 2,763    | 1,492              |
| Elk               | 2,059           | 46            | 1,733  | 3,235           | 1,073  | 291      | 5,207     | 2,447    | 1,586              |
| Greenwood         | 3,741           | 5             | 1,519  | 3,782           | 930    | 368      | 11,252    | 2,486    | 1,391              |
| Labette           | 1,232           | 16            | 987    | 1,918           | 637    | 87       | 1,975     | 973      | 613                |
| Linn              | 4,558           | 318           | 2,667  | 8,671           | 1,235  | 449      | 18,265    | 5,260    | 3,936              |
| Lyon              | 1,187           | 12            | 1,070  | 2,231           | 531    | 427      | 7,488     | 2,360    | 1,258              |
| Marion            | 736             | 1             | 662    | 1,158           | 472    | 161      | 2,591     | 1,166    | 621                |
| Montgomery        | 1,484           | 90            | 1,411  | 3,793           | 590    | 393      | 8,224     | 2,683    | 1,647              |
| Morris            | 729             | 1             | 579    | 1,346           | 302    | 201      | 4,215     | 1,271    | 658                |
| Neosho            | 1,208           | 9             | 915    | 1,762           | 571    | 90       | 1,900     | 910      | 586                |
| Wilson            | 1,461           | 126           | 1,654  | 3,807           | 566    | 379      | 5,903     | 2,474    | 1,888              |
| Woodson           | 1,125           | 11            | 795    | 1,500           | 421    | 83       | 1,724     | 658      | 458                |
| All counties      | 39,358          | 956           | 29,537 | 65,992          | 16,467 | 6,077    | 137,513   | 47,653   | 29,536             |

(Table 45 continued on next page)



(Table 45 continued)

| County    | All species | Species group    |         |                  |                 |                |               |                |               |       |            |            |       |
|-----------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|-------|------------|------------|-------|
|           |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan | Hard maple | Soft maple | Ash   |
| Barber    | 24,452      | --               | 3,286   | --               | --              | --             | --            | --             | --            | 32    | --         | --         | 2,098 |
| Barton    | 3,612       | --               | 682     | --               | --              | --             | --            | --             | --            | 10    | --         | --         | 384   |
| Cheyenne  | 9,498       | --               | 1,546   | --               | --              | --             | --            | --             | --            | 19    | --         | --         | 926   |
| Clark     | 16,084      | --               | 894     | --               | --              | --             | --            | --             | --            | 14    | --         | --         | 862   |
| Cloud     | 35,873      | --               | 6,038   | --               | --              | --             | --            | --             | --            | 73    | --         | --         | 2,585 |
| Comanche  | 2,345       | --               | 301     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 432   |
| Decatur   | 6,697       | --               | 1,325   | --               | --              | --             | --            | --             | --            | 15    | --         | --         | 731   |
| Edwards   | 7,705       | --               | 485     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 344   |
| Ellis     | 8,435       | --               | 1,554   | --               | --              | --             | --            | --             | --            | 20    | --         | --         | 870   |
| Ellsworth | 11,318      | --               | 2,171   | --               | --              | --             | --            | --             | --            | 23    | --         | --         | 1,050 |
| Finney    | 644         | --               | 81      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 101   |
| Ford      | 1,432       | --               | 199     | --               | --              | --             | --            | --             | --            | --    | --         | --         | 342   |
| Gove      | 566         | --               | 102     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 40    |
| Graham    | 15,340      | --               | 2,689   | --               | --              | --             | --            | --             | --            | 25    | --         | --         | 1,652 |
| Grant     | 331         | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 77    |
| Gray      | 4,729       | --               | 121     | --               | --              | --             | --            | --             | --            | --    | --         | --         | 165   |
| Greeley   | 64          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Hamilton  | 5,828       | --               | 799     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 928   |
| Harper    | 16,007      | --               | 2,025   | --               | --              | --             | --            | --             | --            | 16    | --         | --         | 1,459 |
| Harvey    | 4,100       | --               | 642     | --               | --              | --             | --            | --             | --            | --    | --         | --         | 758   |
| Haskell   | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Hodgeman  | --          | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Jewell    | 25,079      | --               | 3,234   | --               | --              | --             | --            | --             | --            | 26    | --         | --         | 2,550 |
| Kearny    | 1,100       | --               | --      | --               | --              | --             | --            | --             | --            | --    | --         | --         | --    |
| Kingman   | 27,329      | --               | 3,139   | --               | --              | --             | --            | --             | --            | 16    | --         | --         | 2,410 |
| Kiowa     | 850         | --               | 79      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 74    |
| Lane      | 165         | --               | 39      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 37    |
| Lincoln   | 11,431      | --               | 1,691   | --               | --              | --             | --            | --             | --            | 23    | --         | --         | 1,031 |
| Logan     | 2,568       | --               | 497     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 306   |
| McPherson | 16,126      | --               | 1,932   | --               | --              | --             | --            | --             | --            | 27    | --         | --         | 998   |
| Meade     | 5,470       | --               | 496     | --               | --              | --             | --            | --             | --            | 8     | --         | --         | 356   |
| Mitchell  | 25,036      | --               | 4,064   | --               | --              | --             | --            | --             | --            | 23    | --         | --         | 2,837 |
| Morton    | 5,124       | --               | 736     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 633   |
| Ness      | 1,522       | --               | 381     | --               | --              | --             | --            | --             | --            | 2     | --         | --         | 171   |
| Norton    | 7,746       | --               | 1,556   | --               | --              | --             | --            | --             | --            | 10    | --         | --         | 1,149 |
| Osborne   | 23,265      | --               | 4,119   | --               | --              | --             | --            | --             | --            | 33    | --         | --         | 2,272 |
| Ottawa    | 23,679      | --               | 4,153   | --               | --              | --             | --            | --             | --            | 27    | --         | --         | 2,324 |
| Pawnee    | 5,251       | --               | 552     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 561   |
| Phillips  | 17,734      | --               | 2,360   | --               | --              | --             | --            | --             | --            | 24    | --         | --         | 2,036 |
| Pratt     | 7,282       | --               | 618     | --               | --              | --             | --            | --             | --            | 10    | --         | --         | 317   |
| Rawlins   | 6,538       | --               | 1,343   | --               | --              | --             | --            | --             | --            | 14    | --         | --         | 699   |
| Reno      | 22,418      | --               | 2,891   | --               | --              | --             | --            | --             | --            | 12    | --         | --         | 2,254 |
| Republic  | 26,504      | --               | 2,962   | --               | --              | --             | --            | --             | --            | 29    | --         | --         | 1,995 |
| Rice      | 8,140       | --               | 568     | --               | --              | --             | --            | --             | --            | 4     | --         | --         | 366   |
| Rooks     | 23,394      | --               | 3,188   | --               | --              | --             | --            | --             | --            | 21    | --         | --         | 2,240 |
| Rush      | 329         | --               | 79      | --               | --              | --             | --            | --             | --            | --    | --         | --         | 74    |
| Russell   | 17,310      | --               | 2,649   | --               | --              | --             | --            | --             | --            | 32    | --         | --         | 1,245 |

(Table 45 continued on next page)

(Table 45 continued on next page)

(Table 45 continued)

| County    | WESTERN UNIT    |               |       |                 |        |          |           |          |                    |
|-----------|-----------------|---------------|-------|-----------------|--------|----------|-----------|----------|--------------------|
|           | Species group   |               |       |                 |        |          |           |          |                    |
|           | Cotton-<br>wood | Bass-<br>wood | Elm   | Black<br>walnut | Willow | Boxelder | Hackberry | Sycamore | Other<br>hardwoods |
| Barber    | 15,259          | --            | 415   | 192             | 473    | 386      | 1,827     | 30       | 454                |
| Barton    | 1,719           | --            | 77    | 40              | 112    | 102      | 393       | --       | 93                 |
| Cheyenne  | 5,090           | --            | 256   | 86              | 210    | 282      | 856       | 14       | 213                |
| Clark     | 11,764          | --            | 182   | 89              | 204    | 196      | 1,744     | --       | 135                |
| Cloud     | 20,618          | --            | 1,111 | 517             | 628    | 759      | 2,588     | 114      | 842                |
| Comanche  | 1,105           | --            | 43    | 39              | 51     | 31       | 300       | --       | 41                 |
| Decatur   | 3,156           | --            | 158   | 69              | 195    | 174      | 684       | 8        | 182                |
| Edwards   | 6,147           | --            | 215   | 37              | 82     | 55       | 271       | --       | 65                 |
| Ellis     | 4,165           | --            | 192   | 106             | 271    | 218      | 811       | 8        | 220                |
| Ellsworth | 5,746           | --            | 284   | 129             | 216    | 296      | 1,055     | 45       | 303                |
| Finney    | 258             | --            | 13    | --              | 14     | 5        | 161       | --       | 11                 |
| Ford      | 638             | --            | 33    | 31              | 35     | 13       | 114       | --       | 27                 |
| Gove      | 300             | --            | 10    | 8               | 16     | 18       | 56        | --       | 14                 |
| Graham    | 7,992           | --            | 377   | 168             | 368    | 354      | 1,300     | 37       | 378                |
| Grant     | 239             | --            | --    | 15              | --     | --       | --        | --       | --                 |
| Gray      | 4,176           | --            | 20    | --              | 21     | 8        | 202       | --       | 16                 |
| Greeley   | 64              | --            | --    | --              | --     | --       | --        | --       | --                 |
| Hamilton  | 2,482           | --            | 122   | 27              | 156    | 80       | 1,119     | --       | 111                |
| Harper    | 9,683           | --            | 385   | 253             | 425    | 342      | 1,043     | 46       | 330                |
| Harvey    | 1,958           | --            | 105   | 31              | 113    | 43       | 365       | --       | 85                 |
| Haskell   | --              | --            | --    | --              | --     | --       | --        | --       | --                 |
| Hodgeman  | --              | --            | --    | --              | --     | --       | --        | --       | --                 |
| Jewell    | 12,891          | --            | 462   | 194             | 619    | 379      | 4,259     | 8        | 457                |
| Kearny    | 703             | --            | --    | --              | --     | --       | 397       | --       | --                 |
| Kingman   | 17,522          | --            | 732   | 561             | 684    | 441      | 1,162     | 114      | 548                |
| Kiowa     | 415             | --            | 13    | --              | 14     | 5        | 239       | --       | 11                 |
| Lane      | 45              | --            | 6     | --              | 7      | 3        | 23        | --       | 5                  |
| Lincoln   | 6,612           | --            | 258   | 147             | 249    | 284      | 884       | 15       | 237                |
| Logan     | 1,218           | --            | 68    | 32              | 79     | 56       | 229       | 7        | 72                 |
| McPherson | 10,841          | --            | 331   | 153             | 263    | 320      | 966       | 23       | 272                |
| Meade     | 3,490           | --            | 86    | 43              | 100    | 83       | 736       | --       | 72                 |
| Mitchell  | 13,858          | --            | 587   | 459             | 480    | 428      | 1,548     | 135      | 617                |
| Morton    | 2,415           | --            | 117   | 38              | 164    | 81       | 829       | --       | 107                |
| Ness      | 674             | --            | 45    | 20              | 16     | 29       | 115       | 15       | 54                 |
| Norton    | 3,343           | --            | 215   | 76              | 236    | 154      | 776       | 15       | 216                |
| Osborne   | 12,841          | --            | 510   | 238             | 446    | 421      | 1,718     | 88       | 579                |
| Ottawa    | 12,643          | --            | 569   | 407             | 570    | 429      | 1,778     | 134      | 645                |
| Pawnee    | 2,997           | --            | 77    | 46              | 93     | 59       | 788       | --       | 74                 |
| Phillips  | 10,058          | --            | 384   | 301             | 540    | 374      | 1,279     | 15       | 363                |
| Pratt     | 5,532           | --            | 121   | 41              | 101    | 100      | 357       | --       | 85                 |
| Rawlins   | 3,059           | --            | 157   | 73              | 176    | 169      | 648       | 15       | 185                |
| Reno      | 13,769          | --            | 525   | 431             | 539    | 290      | 1,132     | 97       | 478                |
| Republic  | 16,771          | --            | 495   | 144             | 511    | 367      | 2,812     | 8        | 410                |
| Rice      | 6,625           | --            | 122   | 44              | 47     | 52       | 218       | 15       | 79                 |
| Rooks     | 14,395          | --            | 465   | 239             | 413    | 362      | 1,538     | 67       | 461                |
| Rush      | 88              | --            | 13    | --              | 14     | 5        | 45        | --       | 11                 |
| Russell   | 10,372          | --            | 374   | 159             | 319    | 342      | 1,414     | 37       | 367                |

(Table 45 continued on next page)

(Table 45 continued)

| County       | All species | Species group    |         |                  |                 |                |               |                |               |        |            |            |         |
|--------------|-------------|------------------|---------|------------------|-----------------|----------------|---------------|----------------|---------------|--------|------------|------------|---------|
|              |             | Eastern redcedar | Bur oak | Select white oak | Other white oak | Select red oak | Other red oak | Select hickory | Other hickory | Pecan  | Hard maple | Soft maple | Ash     |
| Saline       | 11,252      | --               | 2,194   | --               | --              | --             | --            | --             | --            | --     | --         | --         | 1,194   |
| Scott        | 478         | --               | 140     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 55      |
| Sedgwick     | 24,861      | --               | 4,393   | --               | --              | --             | --            | --             | --            | 236    | --         | --         | 2,724   |
| Seward       | 6,722       | --               | 833     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 531     |
| Sheridan     | 4,337       | --               | 662     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 351     |
| Sherman      | --          | --               | --      | --               | --              | --             | --            | --             | --            | --     | --         | --         | --      |
| Smith        | 10,516      | --               | 1,881   | --               | --              | --             | --            | --             | --            | --     | --         | --         | 1,182   |
| Stafford     | 17,554      | --               | 603     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 500     |
| Stanton      | 33          | --               | --      | --               | --              | --             | --            | --             | --            | --     | --         | --         | --      |
| Stevens      | 1,800       | --               | 364     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 231     |
| Sumner       | 59,976      | --               | 8,970   | --               | --              | --             | --            | --             | --            | 524    | --         | --         | 4,329   |
| Thomas       | 2,184       | --               | 102     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 40      |
| Trego        | 4,218       | --               | 693     | --               | --              | --             | --            | --             | --            | --     | --         | --         | 594     |
| Wallace      | 301         | --               | --      | --               | --              | --             | --            | --             | --            | --     | --         | --         | 77      |
| Wichita      | --          | --               | --      | --               | --              | --             | --            | --             | --            | --     | --         | --         | --      |
| All counties | 630,070     | --               | 89,091  | --               | --              | --             | --            | --             | --            | 760    | --         | --         | 56,557  |
| All units    | 2,566,229   | 10,871           | 286,120 | 107,383          | 36,531          | 183,457        | 118,665       | 43,047         | 24,649        | 28,043 | 5,280      | 87,834     | 195,760 |

(Table 45 continued)

(Table 45 continued)

(Table 45 continued)

| County       | Species group |           |        |              |        |          |           |          |                 |
|--------------|---------------|-----------|--------|--------------|--------|----------|-----------|----------|-----------------|
|              | Cotton-wood   | Bass-wood | Elm    | Black walnut | Willow | Boxelder | Hackberry | Sycamore | Other hardwoods |
| Saline       | 5,630         | --        | 323    | 177          | 218    | 246      | 918       | 46       | 306             |
| Scott        | 186           | --        | 18     | 6            | --     | 5        | 30        | 8        | 20              |
| Sedgwick     | 13,145        | --        | 617    | 476          | 514    | 376      | 1,521     | 173      | 686             |
| Seward       | 3,999         | --        | 144    | 88           | 192    | 189      | 620       | --       | 126             |
| Sheridan     | 2,580         | --        | 82     | 48           | 105    | 89       | 317       | 9        | 95              |
| Sherman      | --            | --        | --     | --           | --     | --       | --        | --       | --              |
| Smith        | 5,156         | --        | 235    | 86           | 314    | 247      | 1,159     | --       | 256             |
| Stafford     | 15,612        | --        | 177    | 62           | 100    | 84       | 334       | --       | 82              |
| Stanton      | 33            | --        | --     | --           | --     | --       | --        | --       | --              |
| Stevens      | 784           | --        | 46     | 16           | 61     | 47       | 202       | --       | 49              |
| Sumner       | 37,459        | --        | 2,006  | 717          | 491    | 888      | 2,968     | 342      | 1,282           |
| Thomas       | 1,921         | --        | 10     | 8            | 16     | 18       | 55        | --       | 14              |
| Trego        | 2,150         | --        | 99     | 78           | 83     | 54       | 351       | 23       | 103             |
| Wallace      | 208           | --        | --     | 16           | --     | --       | --        | --       | --              |
| Wichita      | --            | --        | --     | --           | --     | --       | --        | --       | --              |
| All counties | 374,599       | --        | 14,487 | 7,461        | 12,369 | 10,838   | 49,254    | 1,710    | 12,944          |
| All units    | 610,060       | 25,763    | 69,531 | 169,979      | 47,901 | 22,839   | 299,581   | 105,631  | 96,304          |

Table 46.--Net volume of growing stock on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand cubic feet)

| Species group    | All classes | Diameter class (inches at breast height) |         |          |           |           |           |           |           |           |           |        |        | 29.0-39.0+ |
|------------------|-------------|--|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|------------|
|                  |             | 5.0-6.9                                  | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 |        |        |            |
| SOFTWOODS        |             |  |         |          |           |           |           |           |           |           |           |        |        |            |
| Eastern redcedar | 4,591       | 1,439                                    | 1,215   | 477      | 839       | 324       | 96        | 65        | 136       | --        | --        | --     | --     |            |
| Total            | 4,591       | 1,439                                    | 1,215   | 477      | 839       | 324       | 96        | 65        | 136       | --        | --        | --     | --     |            |
| HARDWOODS        |             |  |         |          |           |           |           |           |           |           |           |        |        |            |
| Bur oak          | 60,920      | 2,198                                    | 2,324   | 3,154    | 2,604     | 3,405     | 5,089     | 6,032     | 6,287     | 6,816     | 14,098    | 7,866  | 1,047  |            |
| Select white oak | 34,121      | 3,307                                    | 4,442   | 5,893    | 4,970     | 3,837     | 3,537     | 2,306     | 1,953     | 1,115     | 2,167     | 594    | --     |            |
| Other white oak  | 19,854      | 4,750                                    | 4,281   | 4,011    | 1,742     | 2,316     | 1,308     | 944       | 157       | 196       | 149       | --     | --     |            |
| Select red oak   | 45,828      | 1,941                                    | 4,117   | 5,293    | 6,283     | 3,784     | 5,274     | 4,211     | 4,274     | 1,959     | 5,859     | 2,421  | 412    |            |
| Other red oak    | 27,445      | 1,576                                    | 2,374   | 2,814    | 2,622     | 2,701     | 2,195     | 2,451     | 2,626     | 2,554     | 3,898     | 1,541  | 93     |            |
| Select hickory   | 17,388      | 3,214                                    | 3,457   | 2,915    | 1,943     | 2,259     | 1,378     | 1,517     | 411       | 89        | 205       | --     | --     |            |
| Other hickory    | 11,693      | 2,491                                    | 2,589   | 2,806    | 1,440     | 1,159     | 312       | 373       | 348       | 175       | --        | --     | --     |            |
| Pecan            | 8,986       | 488                                      | 1,004   | 1,785    | 1,337     | 973       | 909       | 473       | 397       | 751       | 385       | 484    | --     |            |
| Hard maple       | 3,120       | 484                                      | 928     | 538      | 459       | 279       | 49        | 43        | 99        | 113       | --        | 128    | --     |            |
| Soft maple       | 21,011      | 485                                      | 1,432   | 1,263    | 1,223     | 2,418     | 2,280     | 2,252     | 1,912     | 1,684     | 3,312     | 1,555  | 1,195  |            |
| Ash              | 61,700      | 6,832                                    | 10,408  | 9,328    | 5,756     | 6,807     | 5,240     | 5,475     | 3,276     | 2,333     | 5,709     | 536    | --     |            |
| Cottonwood       | 134,292     | 2,596                                    | 4,036   | 9,107    | 10,066    | 12,328    | 11,475    | 9,290     | 10,605    | 5,880     | 24,423    | 20,287 | 14,199 |            |
| Basswood         | 6,031       | 399                                      | 392     | 587      | 1,084     | 1,111     | 769       | 592       | 292       | 510       | 179       | --     | 116    |            |
| Elm              | 30,599      | 6,595                                    | 5,638   | 4,192    | 2,243     | 2,720     | 1,645     | 1,437     | 1,242     | 1,284     | 2,577     | 942    | 84     |            |
| Black walnut     | 57,868      | 8,104                                    | 6,807   | 10,891   | 9,541     | 8,487     | 6,036     | 3,835     | 1,536     | 1,596     | 574       | 461    | --     |            |
| Willow           | 11,629      | 509                                      | 882     | 984      | 1,729     | 1,996     | 1,653     | 1,424     | 1,022     | 553       | 757       | --     | 120    |            |
| Boxelder         | 10,376      | 1,836                                    | 2,027   | 1,495    | 1,890     | 1,081     | 713       | 771       | 258       | 222       | 83        | --     | --     |            |
| Hackberry        | 86,674      | 8,452                                    | 9,246   | 10,782   | 10,624    | 10,137    | 10,498    | 7,995     | 5,698     | 4,246     | 5,800     | 3,196  | --     |            |
| Sycamore         | 21,538      | 213                                      | 619     | 634      | 1,129     | 1,190     | 2,530     | 1,695     | 1,580     | 2,268     | 3,750     | 4,139  | 1,791  |            |
| Other hardwoods  | 35,651      | 5,167                                    | 5,521   | 5,180    | 4,759     | 3,970     | 3,527     | 3,153     | 1,672     | 1,215     | 869       | 618    | --     |            |
| Total            | 706,724     | 61,637                                   | 72,524  | 83,652   | 73,444    | 72,958    | 66,417    | 56,269    | 45,645    | 35,559    | 74,794    | 44,768 | 19,057 |            |
| All species      | 711,315     | 63,076                                   | 73,739  | 84,129   | 74,283    | 73,282    | 66,513    | 56,334    | 45,781    | 35,559    | 74,794    | 44,768 | 19,057 |            |

Table 47.--Net volume of sawtimber on commercial forest land by species group and diameter class, Kansas, 1991  
(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | Diameter class (inches at breast height) |               |               |               |               |               |               |               |               |        |    |    |
|------------------|-------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------|----|----|
|                  |             | 9.0-<br>10.9                             | 11.0-<br>12.9 | 13.0-<br>14.9 | 15.0-<br>16.9 | 17.0-<br>18.9 | 19.0-<br>20.9 | 21.0-<br>22.9 | 23.0-<br>28.9 | 29.0-<br>38.9 | 39.0+  |    |    |
|                  |             |  |               |               |               |               |               |               |               |               |        |    |    |
| SOFTWOODS        |             |  |               |               |               |               |               |               |               |               |        |    |    |
| Eastern redcedar | 10,871      | 2,652                                    | 4,643         | 1,878         | 570           | 396           | 732           | --            | --            | --            | --     | -- | -- |
| Total            | 10,871      | 2,652                                    | 4,643         | 1,878         | 570           | 396           | 732           | --            | --            | --            | --     | -- | -- |
| HARDWOODS        |             |  |               |               |               |               |               |               |               |               |        |    |    |
| Bur oak          | 286,120     | --                                       | 15,105        | 19,451        | 29,982        | 33,074        | 32,861        | 38,333        | 74,977        | 36,996        | 5,341  | -- | -- |
| Select white oak | 107,383     | --                                       | 28,207        | 20,572        | 19,392        | 11,728        | 9,392         | 5,574         | 10,042        | 2,476         | --     | -- | -- |
| Other white oak  | 36,531      | --                                       | 9,331         | 12,588        | 7,023         | 4,829         | 919           | 1,008         | 833           | --            | --     | -- | -- |
| Select red oak   | 183,457     | --                                       | 34,179        | 21,851        | 29,427        | 28,500        | 25,576        | 9,396         | 24,613        | 8,358         | 1,557  | -- | -- |
| Other red oak    | 118,665     | --                                       | 14,479        | 14,714        | 12,599        | 14,698        | 15,601        | 15,454        | 22,966        | 7,613         | 541    | -- | -- |
| Select hickory   | 43,047      | --                                       | 11,086        | 12,107        | 7,457         | 8,251         | 2,565         | 512           | 1,069         | --            | --     | -- | -- |
| Other hickory    | 24,649      | --                                       | 7,608         | 6,463         | 1,797         | 6,131         | 1,750         | 900           | --            | --            | --     | -- | -- |
| Pecan            | 28,043      | --                                       | 7,187         | 4,722         | 4,398         | 2,471         | 1,885         | 3,412         | 1,565         | 2,403         | --     | -- | -- |
| Hard maple       | 6,280       | --                                       | 2,572         | 1,442         | 399           | 196           | 479           | 510           | --            | 682           | --     | -- | -- |
| Soft maple       | 87,834      | --                                       | 5,149         | 13,036        | 11,635        | 11,876        | 10,378        | 8,203         | 16,775        | 6,305         | 4,477  | -- | -- |
| Ash              | 185,760     | --                                       | 29,445        | 36,821        | 29,065        | 30,050        | 17,417        | 11,779        | 29,130        | 2,053         | --     | -- | -- |
| Cottonwood       | 610,060     | --                                       | 47,920        | 64,973        | 58,306        | 51,036        | 56,304        | 30,916        | 130,159       | 106,157       | 64,289 | -- | -- |
| Basswood         | 25,763      | --                                       | 5,949         | 5,938         | 4,077         | 3,481         | 1,822         | 3,087         | 1,110         | --            | 299    | -- | -- |
| Elm              | 69,531      | --                                       | 10,734        | 14,458        | 8,287         | 6,784         | 5,892         | 6,816         | 11,866        | 4,188         | 506    | -- | -- |
| Black walnut     | 169,979     | --                                       | 51,197        | 45,359        | 32,738        | 20,232        | 7,497         | 8,302         | 3,188         | 1,466         | --     | -- | -- |
| Willow           | 47,901      | --                                       | 8,763         | 10,110        | 8,234         | 8,262         | 5,535         | 2,651         | 3,706         | --            | 640    | -- | -- |
| Boxelder         | 22,839      | --                                       | 8,390         | 5,347         | 3,667         | 2,896         | 1,257         | 1,065         | 217           | --            | --     | -- | -- |
| Hackberry        | 299,581     | --                                       | 60,494        | 52,628        | 54,700        | 40,550        | 29,835        | 22,716        | 27,210        | 11,448        | --     | -- | -- |
| Sycamore         | 105,631     | --                                       | 5,564         | 6,357         | 15,469        | 8,786         | 8,967         | 12,463        | 20,119        | 19,769        | 8,137  | -- | -- |
| Other hardwoods  | 96,304      | --                                       | 22,973        | 19,744        | 16,999        | 15,093        | 8,712         | 5,916         | 4,213         | 2,654         | --     | -- | -- |
| Total            | 2,555,358   | --                                       | 386,332       | 388,681       | 355,651       | 308,924       | 244,644       | 189,013       | 383,758       | 212,568       | 85,787 | -- | -- |
| All species      | 2,566,229   | 2,652                                    | 390,975       | 390,559       | 356,221       | 309,320       | 245,376       | 189,013       | 383,758       | 212,568       | 85,787 | -- | -- |

<sup>1/</sup>International 1/4-inch rule.

Table 48.--Net volume of growing stock on commercial forest land by species group and forest type, Kansas, 1981  
(In thousand cubic feet)

| Species          | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar | 4,591       | 2,592                     | 617         | --                 | 292                     | 98                 | --         | --     | 215                      | 625                   | 152         |
| Total            | 4,591       | 2,592                     | 617         | --                 | 292                     | 98                 | --         | --     | 215                      | 625                   | 152         |
| HARDWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Bur oak          | 60,920      | 171                       | 29,078      | 381                | 3,613                   | 4,874              | --         | --     | 22,347                   | 393                   | 63          |
| Select white oak | 34,121      | 791                       | 29,061      | 65                 | 708                     | 1,745              | --         | --     | 1,366                    | 385                   | --          |
| Other white oak  | 19,854      | 157                       | 6,135       | 13,166             | 331                     | --                 | --         | --     | --                       | 65                    | --          |
| Select red oak   | 45,828      | 80                        | 36,845      | 979                | 815                     | 2,291              | --         | --     | 3,435                    | 1,383                 | --          |
| Other red oak    | 27,445      | --                        | 22,561      | 1,684              | 365                     | 1,233              | 34         | --     | 1,084                    | 431                   | 53          |
| Select hickory   | 17,388      | 94                        | 13,249      | 302                | 212                     | 1,609              | --         | --     | 1,305                    | 617                   | --          |
| Other hickory    | 11,693      | --                        | 6,029       | 165                | 584                     | 1,140              | --         | --     | 3,640                    | 135                   | --          |
| pecan            | 8,986       | --                        | 7,408       | --                 | 123                     | 1,053              | --         | --     | 235                      | 167                   | --          |
| Hard maple       | 3,120       | --                        | 1,403       | --                 | --                      | 1,117              | --         | --     | 212                      | 388                   | --          |
| Soft maple       | 21,011      | --                        | 330         | --                 | --                      | 15,591             | 67         | --     | 4,845                    | 178                   | --          |
| Ash              | 61,700      | --                        | 6,647       | --                 | 618                     | 39,901             | 1,493      | 206    | 10,998                   | 1,633                 | 204         |
| Cottonwood       | 134,292     | --                        | 1,556       | --                 | 640                     | 34,107             | 90,065     | 383    | 5,166                    | 1,675                 | 700         |
| Basswood         | 6,031       | --                        | 2,883       | --                 | 1,442                   | 485                | 126        | --     | 468                      | 627                   | --          |
| Elm              | 30,599      | 130                       | 5,119       | --                 | 1,274                   | 11,901             | 654        | --     | 7,901                    | 3,235                 | 385         |
| Black walnut     | 57,868      | 580                       | 11,689      | 206                | 6,286                   | 5,315              | 408        | --     | 30,528                   | 2,747                 | 109         |
| Willow           | 11,629      | --                        | 306         | --                 | 53                      | 9,065              | 913        | 567    | 465                      | 141                   | 119         |
| Boxelder         | 10,376      | --                        | 210         | --                 | 200                     | 7,007              | 360        | --     | 2,477                    | 69                    | 53          |
| Hackberry        | 86,674      | 59                        | 6,085       | 68                 | 4,728                   | 13,207             | 346        | --     | 60,377                   | 1,423                 | 381         |
| Sycamore         | 21,538      | --                        | 2,751       | --                 | 279                     | 7,551              | 242        | --     | 9,915                    | 723                   | 77          |
| Other hardwoods  | 35,651      | 91                        | 3,729       | 125                | 1,578                   | 13,339             | 457        | --     | 11,763                   | 4,078                 | 491         |
| Total            | 706,724     | 2,153                     | 193,074     | 17,141             | 23,849                  | 172,531            | 95,165     | 1,156  | 178,527                  | 20,493                | 2,635       |
| All species      | 711,315     | 4,745                     | 193,691     | 17,141             | 24,141                  | 172,629            | 95,165     | 1,156  | 178,742                  | 21,118                | 2,787       |

Table 49.--Net volume of sawtimber on commercial forest land by species group and forest type, Kansas, 1981  
(In thousand board feet)<sup>1/</sup>

| Species          | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar | 10,871      | 7,523                     | 1,649       | --                 | --                      | --                 | --         | --     | 360                      | 958                   | 381         |
| Total            | 10,871      | 7,523                     | 1,649       | --                 | --                      | --                 | --         | --     | 360                      | 958                   | 381         |
| HARDWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Dur oak          | 286,120     | 571                       | 126,292     | --                 | 14,353                  | 25,761             | --         | --     | 117,449                  | 1,694                 | --          |
| Select white oak | 107,383     | 3,423                     | 86,530      | 339                | 1,721                   | 6,867              | --         | --     | 7,072                    | 1,431                 | --          |
| Other white oak  | 36,531      | 301                       | 11,969      | 22,290             | 1,599                   | --                 | --         | --     | --                       | 372                   | --          |
| Select red oak   | 183,457     | --                        | 149,217     | 2,739              | 3,093                   | 11,105             | --         | --     | 13,024                   | 4,279                 | --          |
| Other red oak    | 118,665     | --                        | 103,150     | 2,589              | 1,578                   | 4,332              | --         | --     | 5,085                    | 1,593                 | 338         |
| Select hickory   | 43,047      | --                        | 29,052      | 1,427              | 1,004                   | 7,077              | --         | --     | 3,105                    | 1,382                 | --          |
| Other hickory    | 24,649      | --                        | 12,535      | --                 | --                      | 3,760              | --         | --     | 8,025                    | 329                   | --          |
| pecan            | 28,043      | --                        | 22,543      | --                 | --                      | 4,105              | --         | --     | 760                      | 635                   | --          |
| Hard maple       | 6,280       | --                        | 3,110       | --                 | --                      | 2,182              | --         | --     | --                       | 988                   | --          |
| Soft maple       | 87,834      | --                        | 2,030       | --                 | --                      | 65,063             | 335        | --     | 20,119                   | 287                   | --          |
| Ash              | 185,760     | --                        | 16,443      | --                 | 1,473                   | 118,802            | 2,463      | 369    | 43,785                   | 1,623                 | 802         |
| Cottonwood       | 610,060     | --                        | 6,366       | --                 | 3,395                   | 164,607            | 399,810    | 1,812  | 25,580                   | 5,816                 | 2,674       |
| Basswood         | 25,763      | --                        | 11,756      | --                 | 6,659                   | 2,638              | --         | --     | 1,579                    | 3,131                 | --          |
| Elm              | 69,531      | 342                       | 10,158      | --                 | 2,544                   | 27,533             | 1,447      | --     | 21,838                   | 4,879                 | 790         |
| Black walnut     | 169,979     | 1,061                     | 32,578      | --                 | 14,329                  | 14,742             | 523        | --     | 99,584                   | 7,162                 | --          |
| Willow           | 47,901      | --                        | 698         | --                 | --                      | 40,355             | 2,415      | 1,941  | 1,363                    | 466                   | 663         |
| Boxelder         | 22,839      | --                        | 589         | --                 | 886                     | 12,052             | 806        | --     | 8,506                    | --                    | --          |
| Hackberry        | 299,581     | --                        | 18,596      | 346                | 13,711                  | 39,479             | 1,304      | --     | 222,890                  | 2,627                 | 628         |
| Sycamore         | 105,631     | --                        | 12,700      | --                 | 1,232                   | 38,961             | 904        | --     | 48,446                   | 3,043                 | 345         |
| Other hardwoods  | 96,304      | --                        | 11,222      | 302                | 3,165                   | 36,662             | 205        | --     | 33,076                   | 11,299                | 373         |
| Total            | 2,555,358   | 5,698                     | 667,534     | 30,032             | 70,742                  | 626,083            | 410,212    | 4,122  | 681,286                  | 53,036                | 6,613       |
| All species      |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
|                  | 2,566,229   | 13,221                    | 669,183     | 30,032             | 70,742                  | 626,083            | 410,212    | 4,122  | 681,646                  | 53,994                | 6,994       |

<sup>1/</sup> International 1/4-inch rule.

Table 50.--Net volume of growing stock on commercial forest land by species group and ownership class, Kansas, 1981

(In thousand cubic feet)

| Species group    | All classes | Ownership class |               |        |       |                      |         |               |
|------------------|-------------|-----------------|---------------|--------|-------|----------------------|---------|---------------|
|                  |             | National forest | Misc. federal | Indian | State | County and municipal | Farmer  | Misc. private |
| SOFTWOODS        |             |                 |               |        |       |                      |         |               |
| Eastern redcedar | 4,591       | --              | 52            | --     | --    | --                   | 3,289   | 1,250         |
| Total            | 4,591       | --              | 52            | --     | --    | --                   | 3,289   | 1,250         |
| HARDWOODS        |             |                 |               |        |       |                      |         |               |
| Bur oak          | 60,920      | --              | 1,237         | --     | 282   | --                   | 38,563  | 20,838        |
| Select white oak | 34,121      | --              | 978           | --     | --    | 200                  | 18,816  | 14,127        |
| Other white oak  | 19,854      | --              | 731           | --     | --    | --                   | 14,227  | 4,896         |
| Select red oak   | 45,828      | --              | 1,049         | --     | --    | --                   | 27,348  | 17,431        |
| Other red oak    | 27,445      | --              | 123           | --     | 3,041 | --                   | 15,875  | 8,406         |
| Select hickory   | 17,388      | --              | 616           | --     | 114   | --                   | 8,230   | 8,428         |
| Other hickory    | 11,693      | --              | 450           | --     | --    | --                   | 6,696   | 4,547         |
| Pecan            | 8,986       | --              | --            | --     | 91    | --                   | 3,444   | 5,451         |
| Hard maple       | 3,120       | --              | --            | --     | --    | --                   | 737     | 2,383         |
| Soft maple       | 21,011      | --              | 749           | --     | 1,566 | 659                  | 11,177  | 6,860         |
| Ash              | 61,700      | --              | 1,523         | --     | 941   | --                   | 40,475  | 18,761        |
| Cottonwood       | 134,292     | --              | 9,794         | 398    | 2,130 | --                   | 73,053  | 48,917        |
| Basswood         | 6,031       | --              | 98            | --     | --    | --                   | 3,943   | 1,990         |
| Elm              | 30,599      | --              | 1,192         | 58     | 139   | 130                  | 17,944  | 11,136        |
| Black walnut     | 57,868      | --              | 2,229         | --     | 66    | 223                  | 36,723  | 18,627        |
| Willow           | 11,629      | --              | 232           | --     | 32    | 443                  | 7,763   | 3,159         |
| Boxelder         | 10,376      | --              | 95            | --     | --    | 200                  | 7,379   | 2,702         |
| Hackberry        | 86,674      | --              | 3,628         | 180    | 92    | 990                  | 55,798  | 25,986        |
| Sycamore         | 21,538      | --              | 1,608         | --     | --    | --                   | 15,703  | 4,227         |
| Other hardwoods  | 35,651      | --              | 1,520         | 398    | 246   | 432                  | 19,981  | 13,074        |
| Total            | 706,724     | --              | 27,852        | 1,034  | 8,740 | 3,277                | 423,875 | 241,946       |
| All species      | 711,315     | --              | 27,904        | 1,034  | 8,740 | 3,277                | 427,164 | 243,196       |



Table 51.--Net volume of sawtimber on commercial forest land by species group and ownership class, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | National forest | Misc. federal | Ownership class |        |                      |           |               |
|------------------|-------------|-----------------|---------------|-----------------|--------|----------------------|-----------|---------------|
|                  |             |                 |               | Indian          | State  | County and municipal | Farmer    | Misc. private |
| SOFTWOODS        |             |                 |               |                 |        |                      |           |               |
| Eastern redcedar | 10,871      | --              | --            | --              | --     | --                   | 9,115     | 1,756         |
| Total            | 10,871      | --              | --            | --              | --     | --                   | 9,115     | 1,756         |
| HARDWOODS        |             |                 |               |                 |        |                      |           |               |
| Bur oak          | 286,120     | --              | 5,909         | --              | 1,271  | --                   | 180,540   | 98,400        |
| Select white oak | 107,383     | --              | 3,014         | --              | --     | --                   | 65,965    | 38,404        |
| Other white oak  | 36,531      | --              | 1,902         | --              | --     | --                   | 25,810    | 8,819         |
| Select red oak   | 183,457     | --              | 4,751         | --              | --     | --                   | 105,393   | 73,313        |
| Other red oak    | 118,665     | --              | --            | --              | 18,519 | --                   | 69,966    | 30,180        |
| Select hickory   | 43,047      | --              | 425           | --              | 286    | --                   | 21,144    | 21,192        |
| Other hickory    | 24,649      | --              | --            | --              | --     | --                   | 14,218    | 10,431        |
| Pecan            | 28,043      | --              | --            | --              | 541    | --                   | 12,991    | 14,511        |
| Hard maple       | 6,280       | --              | --            | --              | --     | --                   | 1,617     | 4,663         |
| Soft maple       | 87,834      | --              | 2,936         | --              | 8,597  | 2,004                | 44,993    | 29,304        |
| Ash              | 185,760     | --              | 4,073         | --              | 4,798  | --                   | 118,314   | 58,575        |
| Cottonwood       | 610,060     | --              | 55,081        | 862             | --     | --                   | 336,232   | 217,885       |
| Basswood         | 25,763      | --              | 487           | --              | --     | --                   | 17,069    | 8,207         |
| Elm              | 69,531      | --              | 2,022         | --              | --     | 628                  | 43,595    | 23,286        |
| Black walnut     | 169,979     | --              | 9,998         | --              | 342    | 628                  | 107,965   | 51,046        |
| Willow           | 47,901      | --              | 831           | --              | --     | 2,064                | 31,674    | 13,332        |
| Boxelder         | 22,839      | --              | --            | --              | --     | 886                  | 16,780    | 5,173         |
| Hackberry        | 299,581     | --              | 9,875         | 315             | 471    | 2,492                | 192,875   | 93,553        |
| Sycamore         | 105,631     | --              | 9,068         | --              | --     | --                   | 77,423    | 19,140        |
| Other hardwoods  | 96,304      | --              | 5,351         | 1,513           | 1,591  | 1,970                | 49,455    | 36,424        |
| Total            | 2,555,358   | --              | 115,723       | 2,690           | 36,416 | 10,672               | 1,534,019 | 855,838       |
| All species      | 2,566,229   | --              | 115,723       | 2,690           | 36,416 | 10,672               | 1,543,134 | 857,594       |

<sup>1/</sup>International 1/4-inch rule.

Table 52.--Net volume of growing stock on commercial forest land by forest type and stand-age class, Kansas, 1981  
(In thousand cubic feet)

| Forest type               | All<br>classes | Stand-age class (years) |        |        |        |        |         |         |         |        |        |         |         |       | 141+ |
|---------------------------|----------------|-------------------------|--------|--------|--------|--------|---------|---------|---------|--------|--------|---------|---------|-------|------|
|                           |                | 0-10                    | 11-20  | 21-30  | 31-40  | 41-50  | 51-60   | 61-70   | 71-80   | 81-90  | 91-100 | 101-120 | 121-140 |       |      |
| Eastern redcedar-hardwood | 4,745          | 1,271                   | 466    | --     | 589    | --     | 1,249   | --      | --      | --     | --     | --      | 1,170   | --    |      |
| Oak-hickory               | 193,691        | 8,406                   | 8,315  | 8,768  | 13,044 | 18,005 | 20,214  | 24,112  | 25,032  | 13,084 | 23,229 | 19,842  | 9,680   | 1,960 |      |
| Post-blackjack oak        | 17,141         | 190                     | 85     | 338    | 2,483  | 7,975  | 711     | 348     | 2,130   | 2,125  | --     | 756     | --      | --    |      |
| Upland plains hardwoods   | 24,141         | 948                     | 2,763  | 2,129  | 2,378  | 2,581  | 3,690   | 5,711   | 940     | 877    | --     | 444     | 1,680   | --    |      |
| Elm-ash-cottonwood        | 172,629        | 6,963                   | 11,248 | 5,593  | 11,614 | 9,464  | 36,007  | 28,026  | 27,281  | 19,496 | 8,459  | 8,478   | --      | --    |      |
| Cottonwood                | 95,165         | 135                     | 71     | 1,693  | 3,632  | 13,005 | 10,609  | 25,472  | 11,615  | 5,226  | 14,536 | 9,171   | --      | --    |      |
| Willow                    | 1,156          | --                      | 761    | 270    | --     | --     | 125     | --      | --      | --     | --     | --      | --      | --    |      |
| Lowland plains hardwoods  | 178,742        | 4,557                   | 5,943  | 4,743  | 14,929 | 6,007  | 28,804  | 36,095  | 36,442  | 14,175 | 15,397 | 9,505   | 675     | 1,470 |      |
| Upland elm-ash-locust     | 21,118         | 3,006                   | 4,162  | 1,578  | 2,854  | 579    | 1,165   | 1,970   | 1,677   | 1,504  | 1,142  | 447     | 1,034   | --    |      |
| Nonstocked                | 2,787          | 415                     | 322    | 471    | 295    | --     | 942     | 119     | 280     | 43     | --     | --      | --      | --    |      |
| All types                 | 711,315        | 25,891                  | 34,136 | 25,583 | 51,818 | 57,616 | 103,416 | 121,853 | 105,397 | 56,530 | 62,763 | 48,643  | 14,239  | 3,430 |      |

Table 53.--Net volume of sawtimber on commercial forest land by forest type and stand-age class, Kansas, 1981  
(In thousand board feet)<sup>1/</sup>

| Forest type               | All classes | Stand-age class (years) |        |        |        |         |         |         |         |         |         |         |         |        | 141+ |
|---------------------------|-------------|-------------------------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|------|
|                           |             | 0-10                    | 11-20  | 21-30  | 31-40  | 41-50   | 51-60   | 61-70   | 71-80   | 81-90   | 91-100  | 101-120 | 121-140 |        |      |
| Eastern redcedar-hardwood | 13,221      | 2,209                   | 876    | --     | 1,018  | --      | 4,308   | --      | --      | --      | --      | --      | 4,810   | --     |      |
| Oak-hickory               | 669,183     | 29,466                  | 25,406 | 17,915 | 23,341 | 37,797  | 44,030  | 87,036  | 99,907  | 57,366  | 104,212 | 90,533  | 42,054  | 10,120 |      |
| Post-blackjack oak        | 30,032      | 517                     | --     | --     | 1,222  | 6,406   | 1,653   | 1,071   | 8,419   | 7,290   | --      | 3,454   | --      | --     |      |
| Upland plains hardwoods   | 70,742      | 767                     | 4,978  | 3,868  | 4,176  | 4,392   | 14,329  | 23,320  | 4,463   | 3,394   | --      | 1,335   | 5,720   | --     |      |
| Elm-ash-cottonwood        | 626,083     | 23,616                  | 21,854 | 11,796 | 19,671 | 29,745  | 135,753 | 112,108 | 110,092 | 77,025  | 44,050  | 40,373  | --      | --     |      |
| Cottonwood                | 410,212     | --                      | 347    | 858    | 3,501  | 49,285  | 41,419  | 111,005 | 56,173  | 18,276  | 79,571  | 49,777  | --      | --     |      |
| Willow                    | 4,122       | --                      | 3,144  | 328    | --     | --      | 650     | --      | --      | --      | --      | --      | --      | --     |      |
| Lowland plains hardwoods  | 631,646     | 23,175                  | 16,300 | 10,063 | 31,936 | 19,683  | 100,032 | 146,369 | 156,923 | 59,789  | 65,684  | 40,680  | 3,271   | 7,741  |      |
| Upland elm-ash-locust     | 53,994      | 6,924                   | 7,884  | 2,881  | 6,281  | 1,389   | 4,106   | 7,442   | 4,829   | 4,215   | 3,476   | 1,877   | 2,690   | --     |      |
| Nonstocked                | 6,994       | 1,410                   | 514    | 337    | 373    | --      | 2,513   | 663     | 968     | 216     | --      | --      | --      | --     |      |
| All types                 | 2,566,229   | 88,084                  | 31,303 | 43,046 | 91,519 | 143,697 | 348,793 | 439,014 | 441,774 | 227,571 | 296,993 | 228,029 | 58,545  | 17,861 |      |

<sup>1/</sup>International 1/4-inch rule.

Table 54.--Net volume of growing stock on commercial forest land by forest type, stand-size class, and basal-area class, Kansas, 1981

(In thousand cubic feet)

| Forest type and stand-size class | All classes | Basal-area class (square feet per acre) |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
|----------------------------------|-------------|---|-------|-------|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|----|
|                                  |             | 0-10                                    | 11-20 | 21-30 | 31-40 | 41-50  | 51-60  | 61-70  | 71-80  | 81-90  | 91-100 | 101-120 | 121-150 | 151-180 | 181+   |    |
| Eastern redcedar-hardwood        |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 1,870       | --                                      | --    | --    | --    | --     | --     | --     | --     | --     | --     | 1,870   | --      | --      | --     | -- |
| Poletimber                       | 1,138       | --                                      | --    | --    | --    | --     | --     | 589    | 549    | --     | --     | --      | --      | --      | --     | -- |
| Sapling & seedling               | 1,737       | 32                                      | 133   | --    | 532   | 747    | 293    | --     | --     | --     | --     | --      | --      | --      | --     | -- |
| All stands                       | 4,745       | 32                                      | 133   | --    | 532   | 747    | 293    | 589    | 549    | --     | --     | 1,870   | --      | --      | --     | -- |
| Oak-hickory                      |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 116,700     | --                                      | --    | 277   | 1,220 | 8,219  | 7,987  | 19,731 | 13,943 | 15,803 | 21,678 | 19,380  | 8,462   | --      | --     | -- |
| Poletimber                       | 57,675      | --                                      | --    | --    | 315   | 1,494  | 4,337  | 9,117  | 12,038 | 5,511  | 5,420  | 15,255  | 4,188   | --      | --     | -- |
| Sapling & seedling               | 19,316      | 50                                      | 1,059 | 702   | 6,135 | 4,367  | 1,919  | 1,780  | 1,698  | 992    | 614    | --      | --      | --      | --     | -- |
| All stands                       | 193,691     | 50                                      | 1,059 | 979   | 7,670 | 14,080 | 14,243 | 30,628 | 27,679 | 22,306 | 27,712 | 34,635  | 12,650  | --      | --     | -- |
| Post-blackjack oak               |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 4,329       | --                                      | --    | 442   | --    | --     | 348    | 1,156  | 1,438  | 945    | --     | --      | --      | --      | --     | -- |
| Poletimber                       | 11,805      | --                                      | --    | --    | --    | --     | --     | --     | 2,492  | 953    | 4,040  | 2,661   | 1,659   | --      | --     | -- |
| Sapling & seedling               | 1,007       | --                                      | --    | 85    | --    | --     | 137    | 190    | --     | --     | 595    | --      | --      | --      | --     | -- |
| All stands                       | 17,141      | --                                      | --    | 527   | --    | --     | 485    | 1,346  | 3,930  | 1,898  | 4,635  | 2,661   | 1,659   | --      | --     | -- |
| Upland plains hardwoods          |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 12,942      | --                                      | --    | --    | 425   | 1,437  | 649    | 1,821  | 2,075  | 3,021  | 1,562  | --      | 1,952   | --      | --     | -- |
| Poletimber                       | 8,384       | --                                      | --    | 148   | --    | 563    | 1,677  | 1,178  | 379    | 896    | 2,220  | 1,323   | --      | --      | --     | -- |
| Sapling & seedling               | 2,815       | --                                      | --    | 401   | 420   | 708    | --     | 565    | 293    | 428    | --     | --      | --      | --      | --     | -- |
| All stands                       | 24,141      | --                                      | --    | 549   | 845   | 2,708  | 2,326  | 3,564  | 2,747  | 4,345  | 3,782  | 1,323   | 1,952   | --      | --     | -- |
| Elm-ash-cottonwood               |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 128,904     | --                                      | 260   | 1,342 | 2,960 | 7,752  | 6,741  | 12,361 | 14,166 | 4,976  | 11,827 | 29,083  | 23,239  | 14,197  | --     | -- |
| Poletimber                       | 25,595      | --                                      | --    | 567   | --    | 965    | 3,058  | 3,908  | 2,611  | 5,801  | 2,089  | 5,894   | 702     | --      | --     | -- |
| Sapling & seedling               | 18,130      | 79                                      | 518   | 1,182 | 4,405 | 6,210  | 2,494  | 1,138  | 853    | 108    | 1,143  | --      | --      | --      | --     | -- |
| All stands                       | 172,629     | 79                                      | 778   | 3,091 | 7,365 | 14,927 | 12,293 | 17,407 | 17,630 | 10,885 | 15,059 | 34,977  | 23,941  | 14,197  | --     | -- |
| Cottonwood                       |             |   |       |       |       |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                        | 89,787      | --                                      | 153   | 661   | 478   | 3,153  | 5,217  | 1,106  | 10,047 | 1,779  | 6,722  | 12,604  | 26,647  | 9,885   | 11,335 | -- |
| Poletimber                       | 4,175       | --                                      | --    | --    | --    | --     | 697    | --     | 1,317  | --     | 2,161  | --      | --      | --      | --     | -- |
| Sapling & seedling               | 1,203       | --                                      | 71    | --    | 135   | --     | --     | --     | --     | --     | 997    | --      | --      | --      | --     | -- |
| All stands                       | 95,165      | --                                      | 224   | 661   | 613   | 3,153  | 5,914  | 1,106  | 11,364 | 1,779  | 9,880  | 12,604  | 26,647  | 9,885   | 11,335 | -- |

(Table 54 continued on next page)

(Table 54 continued)

| Forest type and<br>stand-size class | All<br>classes | Basal-area class (square feet per acre) |       |       |        |        |        |        |        |        |        |         |         |         |        |    |
|-------------------------------------|----------------|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|----|
|                                     |                | 0-10                                    | 11-20 | 21-30 | 31-40  | 41-50  | 51-60  | 61-70  | 71-80  | 81-90  | 91-100 | 101-120 | 121-150 | 151-180 | 181+   |    |
| Willow                              |                |   |       |       |        |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                           | 125            | --                                      | --    | --    | --     | --     | --     | --     | --     | --     | --     | 125     | --      | --      | --     | -- |
| Poletimber                          | 270            | --                                      | --    | --    | 270    | --     | --     | --     | --     | --     | --     | --      | --      | --      | --     | -- |
| Sapling & seedling                  | 761            | --                                      | --    | --    | --     | --     | 761    | --     | --     | --     | --     | --      | --      | --      | --     | -- |
| All stands                          | 1,156          | --                                      | --    | --    | 270    | --     | 761    | --     | --     | --     | --     | 125     | --      | --      | --     | -- |
| Lowland plains hardwoods            |                |   |       |       |        |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                           | 142,626        | --                                      | --    | --    | 4,919  | 6,790  | 7,161  | 17,118 | 19,043 | 17,642 | 22,897 | 32,283  | 14,773  | --      | --     | -- |
| Poletimber                          | 25,156         | --                                      | 342   | 401   | 530    | --     | 2,794  | 3,723  | 6,051  | 760    | 4,880  | 5,675   | --      | --      | --     | -- |
| Sapling & seedling                  | 10,960         | --                                      | 417   | 1,012 | 2,241  | 1,889  | 784    | 2,880  | 1,737  | --     | --     | --      | --      | --      | --     | -- |
| All stands                          | 178,742        | --                                      | 759   | 1,413 | 7,690  | 8,679  | 10,739 | 23,721 | 26,831 | 18,402 | 27,777 | 37,958  | 14,773  | --      | --     | -- |
| Upland elm-ash-locust               |                |   |       |       |        |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                           | 8,765          | --                                      | --    | 114   | 879    | 363    | --     | 2,441  | 1,757  | 2,450  | 761    | --      | --      | --      | --     | -- |
| Poletimber                          | 4,371          | --                                      | --    | --    | 265    | --     | 260    | 1,862  | 469    | --     | 809    | 706     | --      | --      | --     | -- |
| Sapling & seedling                  | 7,982          | 50                                      | 1,332 | 589   | 1,278  | 1,555  | 925    | 855    | 867    | --     | 531    | --      | --      | --      | --     | -- |
| All stands                          | 21,118         | 50                                      | 1,332 | 703   | 2,422  | 1,918  | 1,185  | 5,158  | 3,093  | 2,450  | 2,101  | 706     | --      | --      | --     | -- |
| Nonstocked                          | 2,787          | 50                                      | 853   | 167   | 494    | 845    | 316    | 62     | --     | --     | --     | --      | --      | --      | --     | -- |
| All types                           |                |   |       |       |        |        |        |        |        |        |        |         |         |         |        |    |
| Sawtimber                           | 506,048        | --                                      | 413   | 2,836 | 10,881 | 27,714 | 28,103 | 55,734 | 62,469 | 46,616 | 65,447 | 95,345  | 75,073  | 24,082  | 11,335 | -- |
| Poletimber                          | 138,569        | --                                      | 342   | 1,116 | 1,380  | 3,022  | 12,823 | 20,377 | 25,906 | 13,921 | 21,619 | 31,514  | 6,549   | --      | --     | -- |
| Sapling & seedling                  | 63,911         | 211                                     | 3,530 | 3,971 | 15,146 | 15,476 | 7,313  | 7,408  | 5,448  | 1,528  | 3,880  | --      | --      | --      | --     | -- |
| Nonstocked                          | 2,787          | 50                                      | 853   | 167   | 494    | 845    | 316    | 62     | --     | --     | --     | --      | --      | --      | --     | -- |
| All stands                          | 711,315        | 261                                     | 5,138 | 8,090 | 27,901 | 47,057 | 48,555 | 83,581 | 93,823 | 62,065 | 90,946 | 126,859 | 81,622  | 24,082  | 11,335 | -- |

Table 55.--Net volume of sawtimber on commercial forest land by forest type, stand-size class, and basal-area class, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| Forest type and stand-size class |         | All classes | Basal-area class (square feet per acre) |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
|----------------------------------|---------|-------------|---|--------|--------|--------|--------|---------|--------|--------|---------|---------|---------|---------|---------|-------|----|
|                                  |         |             | 0-10                                    | 11-20  | 21-30  | 31-40  | 41-50  | 51-60   | 61-70  | 71-80  | 81-90   | 91-100  | 101-120 | 121-150 | 151-180 | 181+  |    |
| Eastern redcedar-hardwood        |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 7,551   | --          | --                                      | --     | --     | --     | --     | --      | --     | --     | --      | --      | --      | --      | --      | 7,551 | -- |
| Poletimber                       | 2,585   | --          | --                                      | --     | --     | --     | --     | --      | 1,018  | 1,567  | --      | --      | --      | --      | --      | --    | -- |
| Sapling & seedling               | 3,085   | --          | --                                      | --     | 1,298  | 1,471  | 316    | --      | --     | --     | --      | --      | --      | --      | --      | --    | -- |
| All stands                       | 13,221  | --          | --                                      | --     | 1,298  | 1,471  | 316    | 1,018   | 1,567  | --     | --      | 7,551   | --      | --      | --      | --    | -- |
| Oak-hickory                      |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 502,737 | --          | --                                      | 1,050  | 5,534  | 39,096 | 32,298 | 90,535  | 48,094 | 69,043 | 93,971  | 85,432  | 37,684  | --      | --      | --    | -- |
| Poletimber                       | 105,294 | --          | --                                      | --     | --     | 2,714  | 5,899  | 14,888  | 25,228 | 8,762  | 11,698  | 31,041  | 5,064   | --      | --      | --    | -- |
| Sapling & seedling               | 61,152  | --          | 3,847                                   | 2,102  | 18,542 | 16,111 | 4,677  | 5,796   | 6,497  | 1,489  | 2,091   | --      | --      | --      | --      | --    | -- |
| All stands                       | 669,183 | --          | 3,847                                   | 3,152  | 24,076 | 57,921 | 42,874 | 111,219 | 79,819 | 79,294 | 107,760 | 116,473 | 42,748  | --      | --      | --    | -- |
| Post-blackjack oak               |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 16,894  | --          | --                                      | 2,867  | --     | --     | 1,071  | 3,522   | 5,805  | 3,629  | --      | --      | --      | --      | --      | --    | -- |
| Poletimber                       | 12,466  | --          | --                                      | --     | --     | --     | --     | --      | 3,301  | 1,598  | 6,275   | 1,292   | --      | --      | --      | --    | -- |
| Sapling & seedling               | 672     | --          | --                                      | --     | --     | --     | 155    | 517     | --     | --     | --      | --      | --      | --      | --      | --    | -- |
| All stands                       | 30,032  | --          | --                                      | 2,867  | --     | --     | 1,226  | 4,039   | 9,106  | 5,227  | 6,275   | 1,292   | --      | --      | --      | --    | -- |
| Upland plains hardwoods          |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 51,615  | --          | --                                      | --     | 2,251  | 6,023  | 1,966  | 7,783   | 7,644  | 11,715 | 8,257   | --      | 5,976   | --      | --      | --    | -- |
| Poletimber                       | 15,166  | --          | --                                      | --     | --     | 1,407  | 3,181  | 1,868   | --     | 1,784  | 4,513   | 2,413   | --      | --      | --      | --    | -- |
| Sapling & seedling               | 3,961   | --          | --                                      | --     | 2,024  | 473    | --     | --      | 294    | 1,170  | --      | --      | --      | --      | --      | --    | -- |
| All stands                       | 70,742  | --          | --                                      | --     | 4,275  | 7,903  | 5,147  | 9,651   | 7,938  | 14,669 | 12,770  | 2,413   | 5,976   | --      | --      | --    | -- |
| Elm-ash-cottonwood               |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 529,475 | --          | 1,009                                   | 6,911  | 12,522 | 29,764 | 32,633 | 48,100  | 59,250 | 18,447 | 42,297  | 129,997 | 90,325  | 58,220  | --      | --    | -- |
| Poletimber                       | 48,220  | --          | --                                      | 1,235  | --     | 1,319  | 5,837  | 9,993   | 6,343  | 6,738  | 4,619   | 10,602  | 1,534   | --      | --      | --    | -- |
| Sapling & seedling               | 48,388  | 522         | 1,258                                   | 3,608  | 10,344 | 14,628 | 9,053  | 2,458   | 735    | 225    | 5,557   | --      | --      | --      | --      | --    | -- |
| All stands                       | 626,083 | 522         | 2,267                                   | 11,754 | 22,866 | 45,711 | 47,523 | 60,551  | 66,328 | 25,410 | 52,473  | 140,599 | 91,859  | 58,220  | --      | --    | -- |
| Cottonwood                       |         |             |   |        |        |        |        |         |        |        |         |         |         |         |         |       |    |
| Sawtimber                        | 406,054 | --          | 548                                     | 2,152  | 1,624  | 11,869 | 26,627 | 4,744   | 37,663 | 8,722  | 39,360  | 49,792  | 123,350 | 49,003  | 50,600  | --    | -- |
| Poletimber                       | 3,507   | --          | --                                      | --     | --     | --     | 554    | --      | 2,953  | --     | --      | --      | --      | --      | --      | --    | -- |
| Sapling & seedling               | 651     | --          | 347                                     | --     | --     | --     | --     | --      | --     | --     | 304     | --      | --      | --      | --      | --    | -- |
| All stands                       | 410,212 | --          | 895                                     | 2,152  | 1,624  | 11,869 | 27,181 | 4,744   | 40,616 | 8,722  | 39,664  | 49,792  | 123,350 | 49,003  | 50,600  | --    | -- |

<sup>1/</sup> International 1/4-inch rule.

(Table 55 continued on next page)

(Table 55 continued)

| Forest type and<br>stand-size class | All<br>classes | Basal-area class (square feet per acre) |        |        |        |         |         |         |         |         |         |         |         |         |        | 151-180 | 181+ |
|-------------------------------------|----------------|---|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|------|
|                                     |                | 0-10                                    | 11-20  | 21-30  | 31-40  | 41-50   | 51-60   | 61-70   | 71-80   | 81-90   | 91-100  | 101-120 | 121-150 |         |        |         |      |
| Willow                              |                |   |        |        |        |         |         |         |         |         |         |         |         |         |        |         |      |
| Sawtimber                           | 650            | --                                      | --     | --     | --     | --      | --      | --      | --      | --      | --      | 650     | --      | --      | --     | --      |      |
| Poletimber                          | 328            | --                                      | --     | --     | 328    | --      | --      | --      | --      | --      | --      | --      | --      | --      | --     | --      |      |
| Sapling & seedling                  | 3,144          | --                                      | --     | --     | --     | --      | 3,144   | --      | --      | --      | --      | --      | --      | --      | --     | --      |      |
| All stands                          | 4,122          | --                                      | --     | --     | 328    | --      | 3,144   | --      | --      | --      | --      | 650     | --      | --      | --     | --      |      |
| Lowland plains hardwood             |                |   |        |        |        |         |         |         |         |         |         |         |         |         |        |         |      |
| Sawtimber                           | 593,421        | --                                      | --     | --     | 20,821 | 28,066  | 32,332  | 68,809  | 82,310  | 68,893  | 96,574  | 133,375 | 62,241  | --      | --     | --      |      |
| Poletimber                          | 46,369         | --                                      | --     | 337    | 504    | --      | 2,809   | 8,551   | 10,447  | 1,701   | 10,832  | 11,188  | --      | --      | --     | --      |      |
| Sapling & seedling                  | 41,856         | --                                      | 1,358  | 1,521  | 8,699  | 5,456   | 3,192   | 9,105   | 12,525  | --      | --      | --      | --      | --      | --     | --      |      |
| All stands                          | 681,646        | --                                      | 1,358  | 1,858  | 30,024 | 33,522  | 38,333  | 86,465  | 105,282 | 70,594  | 107,406 | 144,563 | 62,241  | --      | --     | --      |      |
| Upland elm-ash-locust               |                |   |        |        |        |         |         |         |         |         |         |         |         |         |        |         |      |
| Sawtimber                           | 28,725         | --                                      | --     | 262    | 3,638  | 1,120   | --      | 7,597   | 5,215   | 8,788   | 2,105   | --      | --      | --      | --     | --      |      |
| Poletimber                          | 7,870          | --                                      | --     | --     | 195    | --      | 620     | 4,103   | 314     | --      | 1,243   | 1,395   | --      | --      | --     | --      |      |
| Sapling & seedling                  | 17,399         | --                                      | 2,593  | 1,760  | 3,124  | 5,106   | 2,373   | 750     | 935     | --      | 758     | --      | --      | --      | --     | --      |      |
| All stands                          | 53,994         | --                                      | 2,593  | 2,022  | 6,957  | 6,226   | 2,993   | 12,450  | 6,464   | 8,788   | 4,106   | 1,395   | --      | --      | --     | --      |      |
| Nonstocked                          | 6,994          | --                                      | 3,140  | 586    | 1,316  | 1,783   | 169     | --      | --      | --      | --      | --      | --      | --      | --     | --      |      |
| All types                           |                |   |        |        |        |         |         |         |         |         |         |         |         |         |        |         |      |
| Sawtimber                           | 2,137,122      | --                                      | 1,557  | 13,242 | 46,390 | 115,938 | 126,927 | 231,090 | 245,981 | 189,237 | 282,564 | 406,797 | 319,576 | 107,223 | 50,600 | --      |      |
| Poletimber                          | 241,805        | --                                      | --     | 1,572  | 1,027  | 5,440   | 18,900  | 40,421  | 50,153  | 20,583  | 39,180  | 57,931  | 6,598   | --      | --     | --      |      |
| Sapling & seedling                  | 180,308        | 522                                     | 9,403  | 8,991  | 44,031 | 43,245  | 22,910  | 18,626  | 20,986  | 2,884   | 8,710   | --      | --      | --      | --     | --      |      |
| Nonstocked                          | 6,994          | --                                      | 3,140  | 586    | 1,316  | 1,783   | 169     | --      | --      | --      | --      | --      | --      | --      | --     | --      |      |
| All stands                          | 2,566,229      | 522                                     | 14,100 | 24,391 | 92,764 | 165,406 | 168,906 | 290,137 | 317,120 | 212,704 | 330,454 | 464,728 | 326,174 | 107,223 | 50,600 | --      |      |

Table 56.--Net volume of sawtimber on commercial forest land by species group and butt log-grade, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| Species group    | All grades | Log grade |         |         |                |
|------------------|------------|-----------|---------|---------|----------------|
|                  |            | 1         | 2       | 3       | Tie and timber |
| SOFTWOODS        |            |           |         |         |                |
| Eastern redcedar | 10,871     | --        | --      | 9,288   | 1,583          |
| Total            | 10,871     | --        | --      | 9,288   | 1,583          |
| HARDWOODS        |            |           |         |         |                |
| Bur oak          | 286,120    | 62,314    | 83,866  | 125,690 | 14,250         |
| Select white oak | 107,383    | 15,773    | 31,101  | 57,630  | 2,879          |
| Other white oak  | 36,531     | 1,511     | 11,996  | 22,451  | 573            |
| Select red oak   | 183,457    | 42,611    | 58,851  | 77,067  | 4,928          |
| Other red oak    | 118,665    | 16,741    | 40,147  | 52,680  | 9,097          |
| Select hickory   | 43,047     | 7,461     | 16,724  | 17,213  | 1,649          |
| Other hickory    | 24,649     | 3,698     | 11,719  | 8,127   | 1,105          |
| Pecan            | 28,043     | 11,015    | 6,254   | 10,774  | --             |
| Hard maple       | 6,280      | 1,141     | 1,889   | 2,698   | 552            |
| Soft maple       | 87,834     | 19,380    | 28,931  | 35,865  | 3,658          |
| Ash              | 185,760    | 68,512    | 61,858  | 53,810  | 1,580          |
| Cottonwood       | 610,060    | 326,242   | 136,913 | 136,314 | 10,591         |
| Basswood         | 25,763     | 8,822     | 3,602   | 12,284  | 1,055          |
| Elm              | 69,531     | 8,683     | 10,404  | 46,889  | 3,555          |
| Black walnut     | 169,979    | 40,924    | 66,343  | 61,521  | 1,191          |
| Willow           | 47,901     | 17,421    | 13,992  | 14,031  | 2,457          |
| Boxelder         | 22,839     | --        | 5,456   | 15,893  | 1,490          |
| Hackberry        | 299,581    | 89,384    | 96,672  | 103,430 | 10,095         |
| Sycamore         | 105,631    | 60,261    | 30,246  | 14,175  | 949            |
| Other hardwoods  | 96,304     | 7,671     | 30,719  | 53,286  | 4,628          |
| Total            | 2,555,358  | 809,565   | 747,683 | 921,828 | 76,282         |
| All species      | 2,566,229  | 809,565   | 747,683 | 931,116 | 77,865         |

<sup>1/</sup> International 1/4-inch rule.

Table 57.--Net volume of growing-stock trees by forest type and ground land use, Kansas, 1981

(In thousand cubic feet)

| Forest type               | Ground land use            |                              |               |            |                |
|---------------------------|----------------------------|------------------------------|---------------|------------|----------------|
|                           | Pastured commercial forest | Unpastured commercial forest | Wooded strips | Windbreaks | Wooded pasture |
| Eastern redcedar-hardwood | 1,262                      | 3,483                        | 16,881        | --         | 1,449          |
| Oak-hickory               | 48,040                     | 145,651                      | 2,309         | --         | 3,939          |
| Post-blackjack oak        | 6,669                      | 10,472                       | --            | --         | --             |
| Upland plains hardwoods   | 9,108                      | 15,033                       | 1,828         | 475        | 1,438          |
| Elm-ash-cottonwood        | 27,954                     | 144,675                      | 36,157        | --         | 6,318          |
| Cottonwood                | 25,286                     | 69,879                       | 3,676         | --         | 1,313          |
| Willow                    | --                         | 1,156                        | 1,336         | --         | --             |
| Lowland plains hardwoods  | 33,580                     | 145,162                      | 12,652        | --         | 2,801          |
| Upland elm-ash-locust     | 8,071                      | 13,047                       | 13,706        | --         | 2,924          |
| Nonstocked                | 1,421                      | 1,366                        | 2,998         | --         | 3,247          |
| All types                 | 161,391                    | 549,924                      | 91,543        | 475        | 23,429         |

Table 58.--Net volume of black walnut, by land class and tree class, Kansas, 1981

| Tree class            | Commercial forest      |                                      | Nonforest with trees                    |                                      |  |
|-----------------------|------------------------|--------------------------------------|---|--------------------------------------|--|
|                       | Thousand<br>cubic feet | Thousand<br>board feet <sup>1/</sup> | Wooded strips<br>Thousand<br>cubic feet | Thousand<br>board feet <sup>1/</sup> | Other nonforest with trees<br>Thousand<br>cubic feet |
| Growing stock         | 57,868                 | --                                   | 3,368                                   | --                                   | 2,133  |
| Sawtimber             | --                     | 169,979                              | --                                      | 8,669                                | --   |
| Short-log cull        | 5,495                  | 13,121                               | 685                                     | 991                                  | 573  |
| Rough and rotten cull | 5,384                  | --                                   | 487                                     | --                                   | 755  |
| All classes           | 68,747                 | 183,100                              | 4,540                                   | 9,660                                | 3,461  |
|                       |                        |                                      |   |                                      | 7,395  |

<sup>1/</sup> International 1/4-inch rule.



Table 59.--Net volume of growing-stock and short-log trees on commercial forest land and wooded strips, by species group and Forest Survey Unit, Kansas, 1981

(In thousand cubic feet)

| ALL UNITS         |         |                        |                 |                     |                 |
|-------------------|---------|------------------------|-----------------|---------------------|-----------------|
| Species group     | Total   | Commercial forest land |                 | Wooded strips       |                 |
|                   |         | Growing-stock trees    | Short-log trees | Growing-stock trees | Short-log trees |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 6,077   | 4,591                  | 410             | 1,076               | --              |
| Total             | 6,077   | 4,591                  | 410             | 1,076               | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 78,929  | 60,920                 | 6,634           | 11,301              | 74              |
| Select white oak  | 39,284  | 34,121                 | 4,875           | 258                 | 30              |
| Other white oak   | 21,641  | 19,854                 | 1,787           | --                  | --              |
| Select red oak    | 49,432  | 45,828                 | 1,755           | 1,658               | 191             |
| Other red oak     | 30,416  | 27,445                 | 2,097           | 874                 | --              |
| Select hickory    | 18,493  | 17,388                 | 928             | 177                 | --              |
| Other hickory     | 13,399  | 11,693                 | 934             | 733                 | 39              |
| Pecan             | 10,665  | 8,986                  | 757             | 798                 | 124             |
| Hard maple        | 3,245   | 3,120                  | 125             | --                  | --              |
| Soft maple        | 25,042  | 21,011                 | 1,078           | 2,953               | --              |
| Ash               | 80,493  | 61,700                 | 5,446           | 11,082              | 2,265           |
| Cottonwood        | 162,335 | 134,292                | 4,011           | 24,032              | --              |
| Basswood          | 7,109   | 6,031                  | 734             | 344                 | --              |
| Elm               | 44,980  | 30,599                 | 8,010           | 5,154               | 1,217           |
| Black walnut      | 67,416  | 57,868                 | 5,495           | 3,368               | 685             |
| Willow            | 14,014  | 11,629                 | 821             | 1,475               | 89              |
| Boxelder          | 17,609  | 10,376                 | 3,487           | 2,174               | 1,572           |
| Hackberry         | 109,599 | 86,674                 | 9,118           | 12,710              | 1,097           |
| Sycamore          | 26,445  | 21,538                 | 250             | 4,657               | --              |
| Other hardwoods   | 52,671  | 35,651                 | 8,677           | 6,719               | 1,624           |
| Total             | 873,217 | 706,724                | 67,019          | 90,467              | 9,007           |
| All species       | 879,294 | 711,315                | 67,429          | 91,543              | 9,007           |
| NORTHEASTERN UNIT |         |                        |                 |                     |                 |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 2,851   | 2,446                  | 225             | 180                 | --              |
| Total             | 2,851   | 2,446                  | 225             | 180                 | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 34,479  | 29,902                 | 3,708           | 869                 | --              |
| Select white oak  | 25,682  | 22,050                 | 3,602           | --                  | 30              |
| Other white oak   | 2,315   | 2,107                  | 208             | --                  | --              |
| Select red oak    | 26,738  | 25,577                 | 911             | 250                 | --              |
| Other red oak     | 16,583  | 15,385                 | 788             | 410                 | --              |
| Select hickory    | 12,395  | 11,801                 | 430             | 164                 | --              |
| Other hickory     | 7,690   | 6,665                  | 719             | 267                 | 39              |
| Pecan             | 265     | 265                    | --              | --                  | --              |
| Hard maple        | 1,938   | 1,938                  | --              | --                  | --              |
| Soft maple        | 13,003  | 10,459                 | 633             | 1,911               | --              |
| Ash               | 18,511  | 13,845                 | 1,283           | 3,159               | 224             |
| Cottonwood        | 48,389  | 43,561                 | 1,017           | 3,811               | --              |
| Basswood          | 6,696   | 5,618                  | 734             | 344                 | --              |
| Elm               | 19,950  | 13,932                 | 3,066           | 2,571               | 381             |
| Black walnut      | 37,917  | 32,366                 | 2,945           | 1,959               | 647             |
| Willow            | 6,204   | 5,021                  | 235             | 948                 | --              |
| Boxelder          | 6,169   | 3,563                  | 865             | 1,191               | 550             |
| Hackberry         | 45,013  | 37,640                 | 2,871           | 3,883               | 619             |
| Sycamore          | 14,808  | 11,447                 | 26              | 3,335               | --              |
| Other hardwoods   | 30,233  | 19,505                 | 4,520           | 5,347               | 861             |
| Total             | 374,978 | 312,647                | 28,561          | 30,419              | 3,351           |
| All species       | 377,829 | 315,093                | 28,786          | 30,599              | 3,351           |

(Table 59 continued on next page)

(Table 59 continued)

| SOUTHEASTERN UNIT |         |                        |                 |                     |                 |
|-------------------|---------|------------------------|-----------------|---------------------|-----------------|
| Species group     | Total   | Commercial forest land |                 | Wooded strips       |                 |
|                   |         | Growing-stock trees    | Short-log trees | Growing-stock trees | Short-log trees |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 2,297   | 2,112                  | 185             | --                  | --              |
| Total             | 2,297   | 2,112                  | 185             | --                  | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 19,183  | 15,644                 | 1,613           | 1,852               | 74              |
| Select white oak  | 13,602  | 12,071                 | 1,273           | 258                 | --              |
| Other white oak   | 19,326  | 17,747                 | 1,579           | --                  | --              |
| Select red oak    | 22,694  | 20,251                 | 844             | 1,408               | 191             |
| Other red oak     | 13,833  | 12,060                 | 1,309           | 464                 | --              |
| Select hickory    | 6,098   | 5,587                  | 498             | 13                  | --              |
| Other hickory     | 5,709   | 5,028                  | 215             | 466                 | --              |
| Pecan             | 10,257  | 8,578                  | 757             | 798                 | 124             |
| Hard maple        | 1,307   | 1,182                  | 125             | --                  | --              |
| Soft maple        | 11,912  | 10,552                 | 318             | 1,042               | --              |
| Ash               | 30,634  | 26,734                 | 1,759           | 1,232               | 909             |
| Cottonwood        | 11,272  | 9,786                  | 438             | 1,048               | --              |
| Basswood          | 413     | 413                    | --              | --                  | --              |
| Elm               | 19,065  | 12,589                 | 3,150           | 2,490               | 836             |
| Black walnut      | 26,920  | 23,004                 | 2,469           | 1,409               | 38              |
| Willow            | 4,860   | 4,204                  | 284             | 283                 | 89              |
| Boxelder          | 4,114   | 1,831                  | 708             | 983                 | 592             |
| Hackberry         | 45,226  | 38,441                 | 2,275           | 4,328               | 182             |
| Sycamore          | 11,333  | 9,787                  | 224             | 1,322               | --              |
| Other hardwoods   | 15,694  | 11,527                 | 2,032           | 1,372               | 763             |
| Total             | 293,452 | 247,016                | 21,870          | 20,768              | 3,798           |
| All species       | 295,749 | 249,128                | 22,055          | 20,768              | 3,798           |
| WESTERN UNIT      |         |                        |                 |                     |                 |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 929     | 33                     | --              | 896                 | --              |
| Total             | 929     | 33                     | --              | 896                 | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 25,267  | 15,374                 | 1,313           | 8,580               | --              |
| Select white oak  | --      | --                     | --              | --                  | --              |
| Other white oak   | --      | --                     | --              | --                  | --              |
| Select red oak    | --      | --                     | --              | --                  | --              |
| Other red oak     | --      | --                     | --              | --                  | --              |
| Select hickory    | --      | --                     | --              | --                  | --              |
| Other hickory     | --      | --                     | --              | --                  | --              |
| Pecan             | 143     | 143                    | --              | --                  | --              |
| Hard maple        | --      | --                     | --              | --                  | --              |
| Soft maple        | 127     | --                     | 127             | --                  | --              |
| Ash               | 31,348  | 21,121                 | 2,404           | 6,691               | 1,132           |
| Cottonwood        | 102,674 | 80,945                 | 2,556           | 19,173              | --              |
| Basswood          | --      | --                     | --              | --                  | --              |
| Elm               | 5,965   | 4,078                  | 1,794           | 93                  | --              |
| Black walnut      | 2,579   | 2,498                  | 81              | --                  | --              |
| Willow            | 2,950   | 2,404                  | 302             | 244                 | --              |
| Boxelder          | 7,326   | 4,982                  | 1,914           | --                  | 430             |
| Hackberry         | 19,360  | 10,593                 | 3,972           | 4,499               | 296             |
| Sycamore          | 304     | 304                    | --              | --                  | --              |
| Other hardwoods   | 6,744   | 4,619                  | 2,125           | --                  | --              |
| Total             | 204,787 | 147,061                | 16,588          | 39,280              | 1,858           |
| All species       | 205,716 | 147,094                | 16,588          | 40,176              | 1,858           |

Table 60.--Net volume of sawtimber and short-log trees on commercial forest land and wooded strips, by species group and Forest Survey Unit, Kansas, 1981

(In thousand board feet)<sup>1/</sup>

| ALL UNITS         |           |                        |                 |                 |                 |
|-------------------|-----------|------------------------|-----------------|-----------------|-----------------|
|                   |           | Commercial forest land |                 | Wooded strips   |                 |
| Species group     | Total     | Sawtimber trees        | Short-log trees | Sawtimber trees | Short-log trees |
| SOFTWOODS         |           |                        |                 |                 |                 |
| Eastern redcedar  | 12,870    | 10,871                 | 779             | 1,220           | --              |
| Total             | 12,870    | 10,871                 | 779             | 1,220           | --              |
| HARDWOODS         |           |                        |                 |                 |                 |
| Bur oak           | 350,299   | 286,120                | 16,080          | 48,099          | --              |
| Select white oak  | 119,652   | 107,383                | 12,269          | --              | --              |
| Other white oak   | 38,525    | 36,531                 | 1,994           | --              | --              |
| Select red oak    | 192,823   | 183,457                | 4,733           | 4,633           | --              |
| Other red oak     | 128,529   | 118,665                | 6,328           | 3,536           | --              |
| Select hickory    | 44,878    | 43,047                 | 1,831           | --              | --              |
| Other hickory     | 27,293    | 24,649                 | 1,685           | 959             | --              |
| Pecan             | 33,204    | 28,043                 | 1,903           | 2,860           | 398             |
| Hard maple        | 6,613     | 6,280                  | 333             | --              | --              |
| Soft maple        | 101,089   | 87,834                 | 2,571           | 10,684          | --              |
| Ash               | 236,913   | 185,760                | 11,798          | 34,894          | 4,461           |
| Cottonwood        | 707,410   | 610,060                | 13,704          | 83,646          | --              |
| Basswood          | 28,141    | 25,763                 | 1,571           | 807             | --              |
| Elm               | 92,790    | 69,531                 | 12,387          | 9,199           | 1,673           |
| Black walnut      | 192,760   | 169,979                | 13,121          | 8,669           | 991             |
| Willow            | 57,075    | 47,901                 | 2,355           | 6,433           | 386             |
| Boxelder          | 39,152    | 22,839                 | 7,992           | 5,125           | 3,196           |
| Hackberry         | 363,523   | 299,581                | 21,596          | 41,472          | 874             |
| Sycamore          | 120,423   | 105,631                | 370             | 14,422          | --              |
| Other hardwoods   | 135,631   | 96,304                 | 12,504          | 23,399          | 3,424           |
| Total             | 3,016,723 | 2,555,358              | 147,125         | 298,837         | 15,403          |
| All species       | 3,029,593 | 2,566,229              | 147,904         | 300,057         | 15,403          |
| NORTHEASTERN UNIT |           |                        |                 |                 |                 |
| SOFTWOODS         |           |                        |                 |                 |                 |
| Eastern redcedar  | 5,209     | 5,106                  | 103             | --              | --              |
| Total             | 5,209     | 5,106                  | 103             | --              | --              |
| HARDWOODS         |           |                        |                 |                 |                 |
| Bur oak           | 136,514   | 124,290                | 8,605           | 3,619           | --              |
| Select white oak  | 87,258    | 77,476                 | 9,782           | --              | --              |
| Other white oak   | 6,476     | 6,145                  | 331             | --              | --              |
| Select red oak    | 106,363   | 104,284                | 2,079           | --              | --              |
| Other red oak     | 76,262    | 70,133                 | 3,922           | 2,207           | --              |
| Select hickory    | 24,651    | 24,060                 | 591             | --              | --              |
| Other hickory     | 15,851    | 14,453                 | 1,398           | --              | --              |
| Pecan             | 575       | 575                    | --              | --              | --              |
| Hard maple        | 3,635     | 3,635                  | --              | --              | --              |
| Soft maple        | 53,320    | 44,464                 | 1,384           | 7,472           | --              |
| Ash               | 57,355    | 42,154                 | 2,698           | 12,186          | 317             |
| Cottonwood        | 212,554   | 196,103                | 2,572           | 13,879          | --              |
| Basswood          | 27,185    | 24,807                 | 1,571           | 807             | --              |
| Elm               | 33,538    | 25,507                 | 3,148           | 4,536           | 347             |
| Black walnut      | 111,345   | 96,526                 | 8,285           | 5,543           | 991             |
| Willow            | 23,260    | 19,065                 | 257             | 3,938           | --              |
| Boxelder          | 9,787     | 5,924                  | 1,818           | 1,129           | 916             |
| Hackberry         | 133,687   | 112,814                | 8,586           | 11,413          | 874             |
| Sycamore          | 64,790    | 56,268                 | --              | 8,522           | --              |
| Other hardwoods   | 81,192    | 53,824                 | 6,979           | 18,801          | 1,588           |
| Total             | 1,265,598 | 1,102,507              | 64,006          | 94,052          | 5,033           |
| All species       | 1,270,807 | 1,107,613              | 64,109          | 94,052          | 5,033           |

(Table 60 continued on next page)

<sup>1/</sup>International 1/4-inch rule.

(Table 60 continued)

| SOUTHEASTERN UNIT |         |                        |                 |                     |                 |
|-------------------|---------|------------------------|-----------------|---------------------|-----------------|
| Species group     | Total   | Commercial forest land |                 | Wooded strips       |                 |
|                   |         | Growing-stock trees    | Short-log trees | Growing-stock trees | Short-log trees |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 6,441   | 5,765                  | 676             | --                  | --              |
| Total             | 6,441   | 5,765                  | 676             | --                  | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 93,901  | 72,739                 | 3,331           | 7,831               | --              |
| Select white oak  | 32,394  | 29,907                 | 2,487           | --                  | --              |
| Other white oak   | 32,049  | 30,386                 | 1,663           | --                  | --              |
| Select red oak    | 86,460  | 79,173                 | 2,654           | 4,633               | --              |
| Other red oak     | 52,267  | 48,532                 | 2,406           | 1,329               | --              |
| Select hickory    | 20,227  | 18,987                 | 1,240           | --                  | --              |
| Other hickory     | 11,442  | 10,196                 | 287             | 959                 | --              |
| Pecan             | 31,869  | 26,708                 | 1,903           | 2,860               | 398             |
| Hard maple        | 2,978   | 2,645                  | 333             | --                  | --              |
| Soft maple        | 47,363  | 43,370                 | 781             | 3,212               | --              |
| Ash               | 96,218  | 87,049                 | 3,406           | 3,867               | 1,896           |
| Cottonwood        | 45,351  | 39,358                 | 1,244           | 4,749               | --              |
| Basswood          | 956     | 956                    | --              | --                  | --              |
| Elm               | 40,542  | 29,537                 | 5,016           | 4,663               | 1,326           |
| Black walnut      | 73,954  | 65,992                 | 4,836           | 3,126               | --              |
| Willow            | 18,858  | 16,467                 | 637             | 1,368               | 386             |
| Boxelder          | 13,231  | 6,077                  | 1,488           | 3,996               | 1,670           |
| Hackberry         | 158,074 | 137,513                | 5,239           | 15,322              | --              |
| Sycamore          | 53,923  | 47,653                 | 370             | 5,900               | --              |
| Other hardwoods   | 38,647  | 29,536                 | 2,677           | 4,598               | 1,836           |
| Total             | 940,704 | 822,781                | 41,998          | 68,413              | 7,512           |
| All species       | 947,145 | 828,546                | 42,674          | 68,413              | 7,512           |
| WESTERN UNIT      |         |                        |                 |                     |                 |
| SOFTWOODS         |         |                        |                 |                     |                 |
| Eastern redcedar  | 1,220   | --                     | --              | 1,220               | --              |
| Total             | 1,220   | --                     | --              | 1,220               | --              |
| HARDWOODS         |         |                        |                 |                     |                 |
| Bur oak           | 129,884 | 89,091                 | 4,144           | 36,649              | --              |
| Select white oak  | --      | --                     | --              | --                  | --              |
| Other white oak   | --      | --                     | --              | --                  | --              |
| Select red oak    | --      | --                     | --              | --                  | --              |
| Other red oak     | --      | --                     | --              | --                  | --              |
| Select hickory    | --      | --                     | --              | --                  | --              |
| Other hickory     | --      | --                     | --              | --                  | --              |
| Pecan             | 760     | 760                    | --              | --                  | --              |
| Hard maple        | --      | --                     | --              | --                  | --              |
| Soft maple        | 406     | --                     | 406             | --                  | --              |
| Ash               | 83,340  | 56,557                 | 5,694           | 18,841              | 2,248           |
| Cottonwood        | 449,505 | 374,599                | 9,888           | 65,018              | --              |
| Basswood          | --      | --                     | --              | --                  | --              |
| Elm               | 18,710  | 14,487                 | 4,223           | --                  | --              |
| Black walnut      | 7,461   | 7,461                  | --              | --                  | --              |
| Willow            | 14,957  | 12,369                 | 1,461           | 1,127               | --              |
| Boxelder          | 16,134  | 10,838                 | 4,686           | --                  | 610             |
| Hackberry         | 71,762  | 49,254                 | 7,771           | 14,737              | --              |
| Sycamore          | 1,710   | 1,710                  | --              | --                  | --              |
| Other hardwoods   | 15,792  | 12,944                 | 2,848           | --                  | --              |
| Total             | 810,421 | 630,070                | 41,121          | 136,372             | 2,858           |
| All species       | 811,641 | 630,070                | 41,121          | 137,592             | 2,858           |

Table 61.--Net volume of short-log trees on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand cubic feet)

| Species group    | All classes | Diameter class (inches at breast height) |         |          |           |           |           |           |           |           |           |       |     |    |    | 29.0-38.9 | 39.0+ |
|------------------|-------------|--|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-----|----|----|-----------|-------|
|                  |             | 5.0-6.9                                  | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 |       |     |    |    |           |       |
| SOFTWOODS        |             |  |         |          |           |           |           |           |           |           |           |       |     |    |    |           |       |
| Eastern redcedar | 410         | 97                                       | 176     | 25       | --        | 85        | 27        | --        | --        | --        | --        | --    | --  | -- | -- | --        |       |
| Total            | 410         | 97                                       | 176     | 25       | --        | 85        | 27        | --        | --        | --        | --        | --    | --  | -- | -- | --        |       |
| HARDWOODS        |             |  |         |          |           |           |           |           |           |           |           |       |     |    |    |           |       |
| Bur oak          | 6,634       | 219                                      | 120     | 476      | 481       | 347       | 352       | 596       | 215       | 607       | 1,752     | 981   | 488 |    |    |           |       |
| Select white oak | 4,875       | 422                                      | 734     | 1,080    | 799       | 365       | 539       | 234       | 141       | 142       | 370       | 49    | --  |    |    |           |       |
| Other white oak  | 1,787       | 543                                      | 406     | 303      | 422       | --        | 50        | --        | --        | --        | 63        | --    | --  |    |    |           |       |
| Select red oak   | 1,755       | 104                                      | 156     | 278      | 353       | 371       | 160       | --        | 159       | 92        | 56        | 26    | --  |    |    |           |       |
| Other red oak    | 2,097       | 176                                      | 446     | 234      | 644       | 135       | 211       | 147       | --        | --        | 104       | --    | --  |    |    |           |       |
| Select hickory   | 928         | 231                                      | 159     | 62       | --        | 246       | 53        | --        | 114       | 63        | --        | --    | --  |    |    |           |       |
| Other hickory    | 934         | 125                                      | 178     | 184      | 270       | 51        | --        | --        | --        | --        | 126       | --    | --  |    |    |           |       |
| Pecan            | 757         | 94                                       | 32      | --       | 55        | 99        | 73        | 195       | 76        | 133       | --        | --    | --  |    |    |           |       |
| Hard maple       | 125         | 36                                       | --      | --       | 89        | --        | --        | --        | --        | --        | --        | --    | --  |    |    |           |       |
| Soft maple       | 1,078       | --                                       | --      | 142      | 208       | 127       | 124       | 83        | 83        | --        | 216       | 95    | --  |    |    |           |       |
| Ash              | 5,446       | 312                                      | 812     | 848      | 584       | 793       | 855       | 316       | 370       | 46        | 510       | --    | --  |    |    |           |       |
| Cottonwood       | 4,011       | --                                       | 178     | 217      | 1,140     | 150       | 438       | 116       | 280       | 317       | 184       | 684   | 307 |    |    |           |       |
| Basswood         | 734         | --                                       | --      | 160      | 192       | 64        | 112       | --        | 82        | --        | 61        | 63    | --  |    |    |           |       |
| Elm              | 8,010       | 1,641                                    | 1,788   | 1,097    | 821       | 631       | 537       | 318       | 267       | 119       | 586       | 205   | --  |    |    |           |       |
| Black walnut     | 5,495       | 752                                      | 603     | 1,060    | 1,048     | 840       | 497       | 165       | 277       | 180       | 73        | --    | --  |    |    |           |       |
| Willow           | 821         | 80                                       | --      | 167      | 155       | 149       | 59        | 111       | 100       | --        | --        | --    | --  |    |    |           |       |
| Boxelder         | 3,487       | 307                                      | 525     | 466      | 256       | 416       | 665       | 672       | 180       | --        | --        | --    | --  |    |    |           |       |
| Hackberry        | 9,118       | 862                                      | 1,390   | 1,029    | 1,718     | 1,533     | 889       | 499       | 390       | 292       | 354       | 162   | --  |    |    |           |       |
| Sycamore         | 250         | --                                       | 140     | --       | 49        | --        | 61        | --        | --        | --        | --        | --    | --  |    |    |           |       |
| Other hardwoods  | 8,677       | 1,958                                    | 2,059   | 1,092    | 841       | 923       | 525       | 309       | 225       | 324       | 319       | 42    | 60  |    |    |           |       |
| Total            | 67,019      | 7,862                                    | 9,726   | 8,895    | 10,125    | 7,240     | 6,200     | 3,761     | 2,959     | 2,315     | 4,774     | 2,307 | 855 |    |    |           |       |
| All species      | 67,429      | 7,959                                    | 9,902   | 8,920    | 10,125    | 7,325     | 6,227     | 3,761     | 2,959     | 2,315     | 4,774     | 2,307 | 855 |    |    |           |       |

Table 62.--Net volume of short-log trees on commercial forest land by species group and diameter class, Kansas, 1981  
(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | Diameter class (inches at breast height) |               |               |               |               |               |               |               |               |               |               |       |
|------------------|-------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
|                  |             | 9.0-<br>10.9                             | 11.0-<br>12.9 | 13.0-<br>14.9 | 15.0-<br>16.9 | 17.0-<br>18.9 | 19.0-<br>20.9 | 21.0-<br>22.9 | 23.0-<br>24.9 | 25.0-<br>26.9 | 27.0-<br>28.9 | 29.0-<br>30.9 | 31.0+ |
| SOFTWOODS        |             |  |               |               |               |               |               |               |               |               |               |               |       |
| Eastern redcedar | 779         | 103                                      | --            | 173           | 503           | --            | --            | --            | --            | --            | --            | --            | --    |
| Total            | 779         | 103                                      | --            | 173           | 503           | --            | --            | --            | --            | --            | --            | --            | --    |
| HARDWOODS        |             |  |               |               |               |               |               |               |               |               |               |               |       |
| Bur oak          | 16,080      | --                                       | 2,480         | 1,379         | 1,419         | 1,830         | 589           | 1,583         | 4,580         | 1,657         | --            | 563           | --    |
| Select white oak | 12,269      | --                                       | 5,010         | 1,447         | 3,329         | 707           | 396           | 267           | 920           | 193           | --            | --            | --    |
| Other white oak  | 1,994       | --                                       | 1,715         | --            | 159           | --            | --            | --            | 120           | --            | --            | --            | --    |
| Select red oak   | 4,733       | --                                       | 1,505         | 1,462         | 765           | --            | 392           | 315           | 233           | 61            | --            | --            | --    |
| Other red oak    | 6,328       | --                                       | 4,089         | 550           | 923           | 556           | --            | --            | 210           | --            | --            | --            | --    |
| Select hickory   | 1,831       | --                                       | --            | 925           | 177           | --            | 434           | 295           | --            | --            | --            | --            | --    |
| Other hickory    | 1,685       | --                                       | 885           | 287           | --            | --            | --            | --            | 513           | --            | --            | --            | --    |
| pecan            | 1,903       | --                                       | 203           | 302           | 243           | 698           | 71            | 386           | --            | --            | --            | --            | --    |
| Hard maple       | 333         | --                                       | 333           | --            | --            | --            | --            | --            | --            | --            | --            | --            | --    |
| Soft maple       | 2,571       | --                                       | 667           | 406           | 348           | 38            | 222           | --            | 721           | 169           | --            | --            | --    |
| Ash              | 11,798      | --                                       | 2,013         | 2,947         | 2,458         | 1,573         | 1,069         | 129           | 1,609         | --            | --            | --            | --    |
| Cottonwood       | 13,704      | --                                       | 4,272         | 600           | 1,380         | 421           | 1,170         | 1,768         | 666           | 2,210         | --            | 1,217         | --    |
| Basswood         | 1,571       | --                                       | 584           | 185           | 299           | --            | 340           | --            | 94            | 69            | --            | --            | --    |
| Elm              | 12,387      | --                                       | 3,049         | 2,026         | 2,041         | 1,314         | 804           | 334           | 2,008         | 811           | --            | --            | --    |
| Black walnut     | 13,121      | --                                       | 4,019         | 4,847         | 1,666         | 542           | 1,126         | 635           | 286           | --            | --            | --            | --    |
| Willow           | 2,355       | --                                       | 472           | 892           | 209           | 430           | 352           | --            | --            | --            | --            | --            | --    |
| Boxelder         | 7,992       | --                                       | 888           | 1,682         | 2,221         | 2,386         | 815           | --            | --            | --            | --            | --            | --    |
| Hackberry        | 21,596      | --                                       | 8,014         | 6,146         | 2,714         | 1,815         | 923           | 690           | 1,004         | 290           | --            | --            | --    |
| Sycamore         | 370         | --                                       | 149           | --            | 221           | --            | --            | --            | --            | --            | --            | --            | --    |
| Other hardwoods  | 12,504      | --                                       | 3,296         | 3,412         | 2,132         | 1,249         | 574           | 692           | 1,007         | 67            | --            | 75            | --    |
| Total            | 147,125     | --                                       | 43,643        | 29,495        | 22,704        | 13,559        | 9,277         | 7,094         | 13,971        | 5,527         | --            | 1,855         | --    |
| All species      | 147,904     | 103                                      | 43,643        | 29,668        | 23,207        | 13,559        | 9,277         | 7,094         | 13,971        | 5,527         | --            | 1,855         | --    |

<sup>1/</sup>International 1/4-inch rule.

Table 63.--Net volume of all live trees on wooded strips by species group and diameter class, Kansas, 1981

(In thousand cubic feet)

| Species group         | All classes | Diameter class (inches at breast height) |         |          |           |           |           |           |           |           |           |           |        |    |    | 29.0-39.0+ |
|-----------------------|-------------|--|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|----|----|------------|
|                       |             | 5.0-6.9                                  | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 | 29.0-38.9 |        |    |    |            |
| SOFTWOODS             |             |  |         |          |           |           |           |           |           |           |           |           |        |    |    |            |
| Eastern redcedar      | 1,186       | 390                                      | 574     | 222      | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Total                 | 1,186       | 390                                      | 574     | 222      | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| HARDWOODS             |             |  |         |          |           |           |           |           |           |           |           |           |        |    |    |            |
| Bur oak               | 11,408      | 61                                       | --      | 136      | 148       | 141       | --        | --        | --        | --        | 638       | 10,284    | --     | -- | -- | --         |
| Select white oak      | 382         | 289                                      | --      | 93       | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Other white oak       | --          | --                                       | --      | --       | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Select red oak        | 1,915       | 157                                      | 99      | 567      | 379       | 157       | --        | --        | --        | --        | --        | 556       | --     | -- | -- | --         |
| Other red oak         | 961         | 68                                       | 49      | 104      | 172       | 481       | --        | --        | 87        | --        | --        | --        | --     | -- | -- | --         |
| Select hickory        | 177         | 177                                      | --      | --       | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Other hickory         | 815         | 51                                       | 274     | 268      | 222       | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| pecan                 | 921         | --                                       | --      | 136      | 135       | 319       | --        | 331       | --        | --        | --        | --        | --     | -- | -- | --         |
| Hard maple            | 34          | 34                                       | --      | --       | --        | --        | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Soft maple            | 3,878       | 364                                      | 311     | 392      | 98        | --        | 247       | 316       | 406       | --        | 924       | 775       | 45     | -- | -- | --         |
| Ash                   | 18,985      | 2,132                                    | 2,350   | 2,300    | 2,162     | 1,694     | 3,103     | 640       | --        | --        | 4,604     | --        | --     | -- | -- | --         |
| Cottonwood            | 25,747      | 159                                      | 424     | 389      | 905       | 587       | 1,320     | 1,167     | 1,488     | --        | 3,205     | 2,980     | 13,054 | 69 | -- | --         |
| Basswood              | 544         | 53                                       | 45      | 97       | 150       | 199       | --        | --        | --        | --        | --        | --        | --     | -- | -- | --         |
| Elm                   | 9,382       | 2,556                                    | 1,392   | 1,970    | 919       | 910       | 776       | 814       | --        | --        | 45        | --        | --     | -- | -- | --         |
| Black walnut          | 4,540       | 770                                      | 894     | 536      | 414       | 957       | 241       | 648       | --        | --        | 48        | 32        | --     | -- | -- | --         |
| Willow                | 1,980       | 146                                      | 185     | 63       | 624       | 51        | --        | 96        | --        | --        | 789       | 27        | --     | -- | -- | --         |
| Boxelder              | 6,499       | 751                                      | 1,527   | 1,041    | 709       | 796       | 786       | 889       | --        | --        | --        | --        | --     | -- | -- | --         |
| Hackberry             | 15,704      | 2,201                                    | 1,670   | 1,353    | 1,722     | 1,400     | 932       | 685       | 1,632     | 483       | 3,549     | 77        | --     | -- | -- | --         |
| Sycamore              | 4,694       | --                                       | 74      | 84       | --        | --        | 213       | --        | --        | 1,072     | --        | 3,251     | --     | -- | -- | --         |
| Other hardwoods       | 11,180      | 1,181                                    | 1,249   | 1,185    | 952       | 1,107     | 745       | 951       | 964       | --        | 1,081     | 1,765     | --     | -- | -- | --         |
| Noncommercial species | 5,854       | 1,338                                    | 1,309   | 1,052    | 539       | 152       | 277       | 487       | --        | 700       | --        | --        | --     | -- | -- | --         |
| Total                 | 125,600     | 12,488                                   | 11,852  | 11,766   | 10,250    | 8,951     | 8,640     | 7,024     | 4,577     | 12,507    | 19,284    | 18,192    | 69     | -- | -- | --         |
| All species           | 126,786     | 12,878                                   | 12,426  | 11,988   | 10,250    | 8,951     | 8,640     | 7,024     | 4,577     | 12,507    | 19,284    | 18,192    | 69     | -- | -- | --         |

Table 64.--Net volume of sawtimber on wooded strips by species group and diameter class, Kansas, 1981  
(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | Diameter class (inches at breast height) |           |           |           |           |           |           |           |           |    |    |    | 29.0-39.0+ |
|------------------|-------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|----|----|------------|
|                  |             | 9.0-10.9                                 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 | 29.0-38.9 |    |    |    |            |
| SOFTWOODS        |             |  |           |           |           |           |           |           |           |           |    |    |    |            |
| Eastern redcedar | 1,220       | 1,220                                    | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Total            | 1,220       | 1,220                                    | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| HARDWOODS        |             |  |           |           |           |           |           |           |           |           |    |    |    |            |
| Bur oak          | 48,099      | --                                       | 805       | 741       | --        | --        | --        | 2,878     | 43,675    | --        | -- | -- | -- | --         |
| Select white oak | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Other white oak  | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Select red oak   | 4,633       | --                                       | 1,651     | 826       | --        | --        | --        | --        | 2,156     | --        | -- | -- | -- | --         |
| Other red oak    | 3,536       | --                                       | 909       | 2,627     | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Select hickory   | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Other hickory    | 959         | --                                       | 959       | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| pecan            | 2,860       | --                                       | 564       | 861       | --        | 1,335     | --        | --        | --        | --        | -- | -- | -- | --         |
| Hard maple       | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Soft maple       | 10,684      | --                                       | 468       | --        | 1,094     | 1,589     | --        | 4,321     | 3,212     | --        | -- | -- | -- | --         |
| Ash              | 34,894      | --                                       | 8,915     | 5,294     | 5,293     | 1,818     | --        | 13,574    | --        | --        | -- | -- | -- | --         |
| Cottonwood       | 83,646      | --                                       | 4,365     | 2,965     | 6,724     | 4,939     | 7,033     | 13,539    | 7,665     | 36,416    | -- | -- | -- | --         |
| Basswood         | 807         | --                                       | 807       | --        | --        | --        | --        | --        | --        | --        | -- | -- | -- | --         |
| Elm              | 9,199       | --                                       | 477       | 2,517     | 2,631     | 3,574     | --        | --        | --        | --        | -- | -- | -- | --         |
| Black walnut     | 8,669       | --                                       | 1,978     | 4,448     | --        | 2,243     | --        | --        | --        | --        | -- | -- | -- | --         |
| Willow           | 6,433       | --                                       | 2,234     | 372       | --        | 373       | --        | 3,454     | --        | --        | -- | -- | -- | --         |
| Boxelder         | 5,125       | --                                       | 1,129     | 570       | 907       | 2,519     | --        | --        | --        | --        | -- | -- | -- | --         |
| Hackberry        | 41,472      | --                                       | 7,354     | 6,112     | 3,107     | 3,468     | 7,899     | --        | 13,158    | 374       | -- | -- | -- | --         |
| Sycamore         | 14,422      | --                                       | --        | --        | 1,082     | --        | --        | 4,818     | --        | 8,522     | -- | -- | -- | --         |
| Other hardwoods  | 23,399      | --                                       | 1,667     | 3,056     | 1,252     | 4,420     | 4,579     | --        | --        | 8,425     | -- | -- | -- | --         |
| Total            | 298,837     | --                                       | 34,382    | 30,389    | 22,090    | 26,278    | 19,511    | 42,584    | 69,866    | 53,737    | -- | -- | -- | --         |
| All species      | 300,057     | 1,220                                    | 34,382    | 30,389    | 22,090    | 26,278    | 19,511    | 42,584    | 69,866    | 53,737    | -- | -- | -- | --         |

<sup>1/</sup> International 1/4-inch rule.



Table 65.--Net volume of short-log trees on wooded strips by species group and diameter class, Kansas, 1951

(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | Diameter class (inches at breast height) |           |           |           |           |           |           |           |           |       |    |
|------------------|-------------|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|----|
|                  |             | 9.0-10.9                                 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0-28.9 | 29.0-38.9 | 39.0+ |    |
| SOFTWOODS        |             |  |           |           |           |           |           |           |           |           |       |    |
| Eastern redcedar | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Total            | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| HARDWOODS        |             |  |           |           |           |           |           |           |           |           |       |    |
| Bur oak          | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Select white oak | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Other white oak  | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Select red oak   | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Other red oak    | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Select hickory   | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Other hickory    | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| pecan            | 398         | --                                       | --        | 398       | --        | --        | --        | --        | --        | --        | --    | -- |
| Hard maple       | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Soft maple       | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Ash              | 4,462       | --                                       | 680       | --        | 2,248     | 643       | --        | 891       | --        | --        | --    | -- |
| Cottonwood       | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Basswood         | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Elm              | 1,673       | --                                       | 343       | 691       | 539       | --        | --        | --        | --        | --        | --    | -- |
| Black walnut     | 991         | --                                       | --        | 313       | 678       | --        | --        | --        | --        | --        | --    | -- |
| Willow           | 396         | --                                       | 386       | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Boxelder         | 3,196       | --                                       | 1,246     | 280       | 757       | 913       | --        | --        | --        | --        | --    | -- |
| Hackberry        | 874         | --                                       | 325       | --        | 549       | --        | --        | --        | --        | --        | --    | -- |
| Sycamore         | --          | --                                       | --        | --        | --        | --        | --        | --        | --        | --        | --    | -- |
| Other hardwoods  | 3,424       | --                                       | 1,271     | 421       | 759       | --        | --        | --        | 973       | --        | --    | -- |
| Total            | 15,404      | --                                       | 4,251     | 2,103     | 5,630     | 1,556     | --        | 891       | 973       | --        | --    | -- |
| All species      | 15,404      | --                                       | 4,251     | 2,103     | 5,630     | 1,556     | --        | 891       | 973       | --        | --    | -- |

<sup>1/</sup>International 1/4-inch rule.

Table 66.--Net volume of growing stock on wooded strips by species group and forest type, Kansas, 1981  
(In thousand cubic feet)

| Species          | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar | 1,077       | 1,058                     | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | 19          |
| Total            | 1,077       | 1,058                     | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | 19          |
| HARDWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Bur oak          | 11,302      | --                        | 231         | --                 | --                      | 10,433             | --         | --     | --                       | 638                   | --          |
| Select white oak | 258         | --                        | 258         | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Other white oak  | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Select red oak   | 1,658       | --                        | 305         | --                 | 250                     | 887                | --         | --     | --                       | --                    | 216         |
| Other red oak    | 874         | --                        | 414         | --                 | --                      | 450                | --         | --     | --                       | --                    | --          |
| Select hickory   | 177         | --                        | --          | --                 | --                      | 13                 | --         | --     | 147                      | 17                    | --          |
| Other hickory    | 733         | --                        | 384         | --                 | --                      | 285                | --         | --     | 54                       | --                    | --          |
| pecan            | 798         | --                        | --          | --                 | --                      | 798                | --         | --     | --                       | --                    | --          |
| Hard maple       | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Soft maple       | 2,953       | --                        | --          | --                 | --                      | 2,905              | --         | --     | --                       | --                    | 48          |
| Ash              | 11,081      | 1,814                     | --          | --                 | --                      | 6,848              | --         | --     | 949                      | 1,434                 | 36          |
| Cottonwood       | 24,032      | 14,009                    | --          | --                 | --                      | 2,279              | 3,676      | 997    | --                       | 1,583                 | 1,488       |
| Basswood         | 344         | --                        | --          | --                 | 344                     | --                 | --         | --     | --                       | --                    | --          |
| Elm              | 5,154       | --                        | 72          | --                 | 274                     | 2,266              | --         | --     | 583                      | 1,868                 | 91          |
| Black walnut     | 3,367       | --                        | 117         | --                 | 85                      | 403                | --         | --     | 2,694                    | --                    | 58          |
| Willow           | 1,474       | --                        | --          | --                 | 43                      | 131                | --         | 168    | --                       | 136                   | 996         |
| Boxelder         | 2,175       | --                        | --          | --                 | --                      | 1,341              | --         | --     | 834                      | --                    | --          |
| Hackberry        | 12,709      | --                        | 381         | --                 | 287                     | 6,461              | --         | 155    | 4,673                    | 752                   | --          |
| Sycamore         | 4,657       | --                        | --          | --                 | --                      | --                 | --         | --     | 1,322                    | 3,335                 | --          |
| Other hardwoods  | 6,720       | --                        | 147         | --                 | 545                     | 647                | --         | 16     | 1,386                    | 3,943                 | 36          |
| Total            | 90,466      | 15,823                    | 2,309       | --                 | 1,828                   | 36,157             | 3,676      | 1,336  | 12,652                   | 13,706                | 2,979       |
| All species      | 91,543      | 16,881                    | 2,309       | --                 | 1,828                   | 36,157             | 3,676      | 1,336  | 12,652                   | 13,706                | 2,998       |

Table 67.--Net volume of sawtimber on wooded strips by species group and forest type, Kansas, 1981  
(In thousand board feet)<sup>1/</sup>

| Species          | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        | 1,220       | 1,220                     | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Eastern redcedar | 1,220       | 1,220                     | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Total            | 1,220       | 1,220                     | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| HARDWOODS        | 48,099      | --                        | 741         | --                 | --                      | 44,480             | --         | --     | --                       | 2,878                 | --          |
| Bur oak          | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Select white oak | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Other white oak  | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Select red oak   | 4,633       | --                        | --          | --                 | --                      | 3,531              | --         | --     | --                       | --                    | 1,102       |
| Other red oak    | 3,536       | --                        | 1,329       | --                 | --                      | 2,207              | --         | --     | --                       | --                    | --          |
| Select hickory   | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Other hickory    | 959         | --                        | --          | --                 | --                      | 959                | --         | --     | --                       | --                    | --          |
| pecan            | 2,860       | --                        | --          | --                 | --                      | 2,860              | --         | --     | --                       | --                    | --          |
| Hard maple       | --          | --                        | --          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Soft maple       | 10,684      | --                        | --          | --                 | --                      | 10,684             | --         | --     | --                       | --                    | --          |
| Ash              | 34,894      | 8,180                     | --          | --                 | --                      | 19,701             | --         | --     | 3,413                    | 3,600                 | --          |
| Cottonwood       | 83,646      | 41,355                    | --          | --                 | --                      | 7,182              | 16,629     | 4,187  | --                       | 7,260                 | 7,033       |
| Basswood         | 807         | --                        | --          | --                 | 807                     | --                 | --         | --     | --                       | --                    | --          |
| Elm              | 9,199       | --                        | --          | --                 | 477                     | 2,631              | --         | --     | 1,297                    | 4,794                 | --          |
| Black walnut     | 8,669       | --                        | --          | --                 | --                      | 847                | --         | --     | 7,367                    | --                    | 455         |
| Willow           | 6,433       | --                        | --          | --                 | --                      | 623                | --         | 745    | --                       | 484                   | 4,581       |
| Boxelder         | 5,125       | --                        | --          | --                 | --                      | 2,008              | --         | --     | 3,117                    | --                    | --          |
| Hackberry        | 41,472      | --                        | 1,037       | --                 | --                      | 24,172             | --         | 374    | 12,556                   | 3,333                 | --          |
| Sycamore         | 14,422      | --                        | --          | --                 | --                      | --                 | --         | --     | 5,900                    | 8,522                 | --          |
| Other hardwoods  | 23,399      | --                        | 413         | --                 | 2,093                   | 1,252              | --         | --     | 3,991                    | 15,650                | --          |
| Total            | 298,837     | 49,535                    | 3,520       | --                 | 3,377                   | 123,137            | 16,629     | 5,306  | 37,641                   | 46,521                | 13,171      |
| All species      | 300,057     | 50,755                    | 3,520       | --                 | 3,377                   | 123,137            | 16,629     | 5,306  | 37,641                   | 46,521                | 13,171      |

<sup>1/</sup> International 1/4-inch rule.

Table 68.--Net annual growth of growing stock  
on commercial forest land by softwoods and  
hardwoods, Kansas, 1964 and 1980

(In thousand cubic feet)

| Species     | 1964 <sup>1/</sup> | 1980   |
|-------------|--------------------|--------|
| Softwoods   | --                 | 471    |
| Hardwoods   | 22,100             | 22,759 |
| All species | 22,100             | 23,230 |

<sup>1/</sup> Figures have been adjusted from those published after the 1965 survey to conform to 1980 volumes because of changes in survey definitions and procedures.

Table 69.--Net annual growth of growing stock on commercial forest land  
by species group and Forest Survey Unit, Kansas, 1980

(In thousand cubic feet)

| Species group    | Forest Survey Unit |                    |                    |              |
|------------------|--------------------|--------------------|--------------------|--------------|
|                  | All Units          | North-eastern Unit | South-eastern Unit | Western Unit |
| SOFTWOODS        |                    |                    |                    |              |
| Eastern redcedar | 471                | 271                | 197                | 3            |
| Total            | 471                | 271                | 197                | 3            |
| HARDWOODS        |                    |                    |                    |              |
| Bur oak          | 1,251              | 576                | 433                | 242          |
| Select white oak | 779                | 485                | 294                | --           |
| Other white oak  | 594                | 43                 | 551                | --           |
| Select red oak   | 1,467              | 674                | 793                | --           |
| Other red oak    | 611                | 282                | 329                | --           |
| Select hickory   | 467                | 341                | 126                | --           |
| Other hickory    | 470                | 341                | 129                | --           |
| Pecan            | 254                | 4                  | 247                | 3            |
| Hard maple       | 94                 | 58                 | 36                 | --           |
| Soft maple       | 941                | 423                | 518                | --           |
| Ash              | 1,958              | 403                | 892                | 663          |
| Cottonwood       | 2,525              | 1,023              | 179                | 1,323        |
| Basswood         | 199                | 166                | 33                 | --           |
| Elm              | 678                | 224                | 538                | -84          |
| Black walnut     | 2,167              | 926                | 1,010              | 231          |
| Willow           | 382                | 138                | 131                | 113          |
| Boxelder         | 762                | 226                | 68                 | 468          |
| Hackberry        | 4,454              | 1,755              | 2,184              | 515          |
| Sycamore         | 590                | 268                | 314                | 8            |
| Other hardwoods  | 2,116              | 1,032              | 708                | 376          |
| Total            | 22,759             | 9,388              | 9,513              | 3,858        |
| All species      | 23,230             | 9,659              | 9,710              | 3,861        |

Table 70.--Net annual growth of sawtimber on commercial forest land  
by species group and Forest Survey Unit, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group    | All<br>Units | Forest Survey Unit        |                           |                 |
|------------------|--------------|---------------------------|---------------------------|-----------------|
|                  |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS        |              |                           |                           |                 |
| Eastern redcedar | 90           | 95                        | -5                        | --              |
| Total            | 90           | 95                        | -5                        | --              |
| HARDWOODS        |              |                           |                           |                 |
| Bur oak          | 4,255        | 1,738                     | 1,408                     | 1,109           |
| Select white oak | 2,041        | 1,772                     | 269                       | --              |
| Other white oak  | 460          | 102                       | 358                       | --              |
| Select red oak   | 7,275        | 3,977                     | 3,298                     | --              |
| Other red oak    | 1,179        | 902                       | 277                       | --              |
| Select hickory   | 953          | 796                       | 157                       | --              |
| Other hickory    | 1,060        | 479                       | 581                       | --              |
| Pecan            | 1,113        | 1                         | 1,103                     | 9               |
| Hard maple       | 607          | 66                        | 541                       | --              |
| Soft maple       | 3,170        | 1,462                     | 1,708                     | --              |
| Ash              | 4,768        | 870                       | 3,299                     | 599             |
| Cottonwood       | 8,773        | 2,432                     | 1,003                     | 5,338           |
| Basswood         | 360          | 354                       | 6                         | --              |
| Elm              | -2,234       | -2,142                    | 763                       | -855            |
| Black walnut     | 5,911        | 2,892                     | 2,994                     | 25              |
| Willow           | 2,742        | 1,860                     | 444                       | 438             |
| Boxelder         | 1,642        | 728                       | 476                       | 438             |
| Hackberry        | 13,246       | 5,463                     | 6,444                     | 1,339           |
| Sycamore         | 2,403        | 892                       | 1,482                     | 29              |
| Other hardwoods  | 4,223        | 2,782                     | 984                       | 457             |
| Total            | 63,947       | 27,426                    | 27,595                    | 8,926           |
| All species      | 64,037       | 27,521                    | 27,590                    | 8,926           |

<sup>1/</sup> International 1/4-inch rule.

Table 71.--Net annual growth of growing stock on commercial forest land by species group and ownership class, Kansas, 1980

(In thousand cubic feet)

| Species group    | All classes | Ownership class |               |        |       |                      |        |               |
|------------------|-------------|-----------------|---------------|--------|-------|----------------------|--------|---------------|
|                  |             | National forest | Misc. federal | Indian | State | County and municipal | Farmer | Misc. private |
| SOFTWOODS        |             |                 |               |        |       |                      |        |               |
| Eastern redcedar | 471         | --              | 2             | --     | --    | --                   | 325    | 144           |
| Total            | 471         | --              | 2             | --     | --    | --                   | 325    | 144           |
| HARDWOODS        |             |                 |               |        |       |                      |        |               |
| Bur oak          | 1,251       | --              | 164           | --     | 4     | --                   | 715    | 368           |
| Select white oak | 779         | --              | 15            | --     | --    | 7                    | 314    | 443           |
| Other white oak  | 594         | --              | 18            | --     | --    | --                   | 432    | 144           |
| Select red oak   | 1,467       | --              | 27            | --     | --    | --                   | 891    | 549           |
| Other red oak    | 611         | --              | 6             | --     | 22    | --                   | 270    | 313           |
| Select hickory   | 467         | --              | 13            | --     | 4     | --                   | 252    | 198           |
| Other hickory    | 470         | --              | 8             | --     | --    | --                   | 309    | 153           |
| Pecan            | 254         | --              | --            | --     | 2     | --                   | 113    | 139           |
| Hard maple       | 94          | --              | --            | --     | --    | --                   | 29     | 65            |
| Soft maple       | 941         | --              | 22            | --     | 75    | 42                   | 567    | 235           |
| Ash              | 1,958       | --              | 40            | --     | 25    | --                   | 1,347  | 546           |
| Cottonwood       | 2,525       | --              | 276           | 2      | 159   | --                   | 1,656  | 432           |
| Basswood         | 199         | --              | 2             | --     | --    | --                   | 125    | 72            |
| Elm              | 678         | --              | 52            | 3      | 5     | 2                    | 519    | 97            |
| Black walnut     | 2,167       | --              | 50            | --     | 2     | --                   | 1,162  | 953           |
| Willow           | 382         | --              | 2             | --     | 4     | 23                   | 248    | 105           |
| Boxelder         | 762         | --              | --            | --     | --    | 10                   | 475    | 277           |
| Hackberry        | 4,454       | --              | 203           | 7      | 2     | 54                   | 2,828  | 1,360         |
| Sycamore         | 590         | --              | 42            | --     | --    | --                   | 447    | 101           |
| Other hardwoods  | 2,116       | --              | 78            | 13     | 12    | 14                   | 1,336  | 663           |
| Total            | 22,759      | --              | 1,018         | 25     | 316   | 152                  | 14,035 | 7,213         |
| All species      | 23,230      | --              | 1,020         | 25     | 316   | 152                  | 14,360 | 7,357         |

Table 72.--Net annual growth of sawtimber on commercial forest land by species group and ownership class, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group    | All classes | Ownership class |               |        |       |                      |        |               |
|------------------|-------------|-----------------|---------------|--------|-------|----------------------|--------|---------------|
|                  |             | National forest | Misc. federal | Indian | State | County and municipal | Farmer | Misc. private |
| SOFTWOODS        |             |                 |               |        |       |                      |        |               |
| Eastern redcedar | 90          | --              | --            | --     | --    | --                   | 70     | 20            |
| Total            | 90          | --              | --            | --     | --    | --                   | 70     | 20            |
| HARDWOODS        |             |                 |               |        |       |                      |        |               |
| Bur oak          | 4,255       | --              | 104           | --     | 11    | --                   | 2,954  | 1,186         |
| Select white oak | 2,041       | --              | 30            | --     | --    | --                   | 1,395  | 616           |
| Other white oak  | 460         | --              | 39            | --     | --    | --                   | 355    | 66            |
| Select red oak   | 7,275       | --              | 627           | --     | --    | --                   | 2,689  | 3,959         |
| Other red oak    | 1,179       | --              | --            | --     | 116   | --                   | 158    | 905           |
| Select hickory   | 953         | --              | 3             | --     | 8     | --                   | 305    | 637           |
| Other hickory    | 1,060       | --              | --            | --     | --    | --                   | 93     | 967           |
| Pecan            | 1,113       | --              | --            | --     | 6     | --                   | 807    | 300           |
| Hard maple       | 607         | --              | --            | --     | --    | --                   | 308    | 299           |
| Soft maple       | 3,170       | --              | 95            | --     | 250   | 237                  | 1,177  | 1,411         |
| Ash              | 4,768       | --              | 112           | --     | 420   | --                   | 3,323  | 913           |
| Cottonwood       | 8,773       | --              | 843           | 2      | --    | --                   | 6,435  | 1,493         |
| Basswood         | 360         | --              | 9             | --     | --    | --                   | 240    | 111           |
| Elm              | -2,234      | --              | -14           | --     | --    | 7                    | -1,392 | -835          |
| Black walnut     | 5,911       | --              | 211           | --     | 13    | --                   | 3,560  | 2,127         |
| Willow           | 2,742       | --              | --            | --     | --    | 187                  | 2,155  | 400           |
| Boxelder         | 1,642       | --              | --            | --     | --    | 367                  | 685    | 590           |
| Hackberry        | 13,246      | --              | 340           | 13     | 9     | 120                  | 8,437  | 4,327         |
| Sycamore         | 2,403       | --              | 148           | --     | --    | --                   | 1,938  | 317           |
| Other hardwoods  | 4,223       | --              | 111           | 44     | 33    | 70                   | 2,131  | 1,834         |
| Total            | 63,947      | --              | 2,658         | 59     | 866   | 988                  | 37,753 | 21,623        |
| All species      | 64,037      | --              | 2,658         | 59     | 866   | 988                  | 37,823 | 21,643        |

<sup>1/</sup> International 1/4-inch rule.

Table 73.--Net annual growth of growing stock on commercial forest land by species group and forest type, Kansas, 1980  
(In thousand cubic feet)

| Species          | Forest type |                           |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar | 471         | 170                       | 22          | --                 | 23                      | 2                  | --         | --     | 102                      | 146                   | 6           |
| Total            | 471         | 170                       | 22          | --                 | 23                      | 2                  | --         | --     | 102                      | 146                   | 6           |
| HARDWOODS        |             |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Bur oak          | 1,251       | 2                         | 430         | 8                  | 163                     | 65                 | --         | --     | 574                      | 8                     | 1           |
| Select white oak | 779         | -23                       | 632         | 1                  | 17                      | 122                | --         | --     | 21                       | 9                     | --          |
| Other white oak  | 594         | 3                         | 111         | 470                | 9                       | --                 | --         | --     | --                       | 1                     | --          |
| Select red oak   | 1,467       | 2                         | 1,205       | 24                 | 68                      | 43                 | --         | --     | 89                       | 36                    | --          |
| Other red oak    | 611         | --                        | 457         | 83                 | 6                       | -24                | 63         | --     | 13                       | 13                    | --          |
| Select hickory   | 467         | 2                         | 389         | -15                | 7                       | 36                 | --         | --     | 32                       | 16                    | --          |
| Other hickory    | 470         | --                        | 329         | 7                  | 27                      | 25                 | --         | --     | 78                       | 4                     | --          |
| pecan            | 254         | --                        | 183         | --                 | 15                      | 42                 | --         | --     | 3                        | 11                    | --          |
| Hard maple       | 94          | --                        | 37          | --                 | --                      | 31                 | --         | --     | 11                       | 15                    | --          |
| Soft maple       | 941         | --                        | 11          | --                 | --                      | 754                | 2          | --     | 167                      | 7                     | --          |
| Ash              | 1,958       | --                        | 152         | --                 | 18                      | 1,260              | 105        | 9      | 268                      | 142                   | 4           |
| Cottonwood       | 2,525       | --                        | 39          | --                 | 7                       | 261                | 2,054      | 12     | 100                      | 16                    | 36          |
| Basswood         | 199         | --                        | 55          | --                 | 55                      | 6                  | 4          | --     | 65                       | 14                    | --          |
| Elm              | 678         | 2                         | 205         | --                 | 160                     | 467                | 46         | --     | -369                     | 160                   | 7           |
| Black walnut     | 2,167       | 21                        | 369         | 3                  | 293                     | 272                | 24         | --     | 1,117                    | 65                    | 3           |
| Willow           | 382         | --                        | 5           | --                 | 3                       | 334                | -3         | 24     | 9                        | 5                     | 5           |
| Boxelder         | 762         | --                        | 7           | --                 | 10                      | 594                | 23         | --     | 122                      | 4                     | 2           |
| Hackberry        | 4,454       | 2                         | 312         | 1                  | 355                     | 763                | 13         | --     | 2,939                    | 46                    | 23          |
| Sycamore         | 590         | --                        | 60          | -8                 | 10                      | 223                | 10         | --     | 277                      | 16                    | 2           |
| Other hardwoods  | 2,116       | 2                         | 201         | 3                  | 71                      | 834                | 18         | --     | 660                      | 304                   | 23          |
| Total            | 22,759      | 13                        | 5,189       | 577                | 1,294                   | 6,108              | 2,359      | 45     | 6,176                    | 892                   | 106         |
| All species      | 23,230      | 183                       | 5,211       | 577                | 1,317                   | 6,110              | 2,359      | 45     | 6,278                    | 1,038                 | 112         |



Table 74.--Net annual growth of sawtimber on commercial forest land by species group and forest type, Kansas, 1980  
(In thousand board feet)<sup>1/</sup>

| Species          | All types | Forest type               |             |                    |                         |                    |            |        |                          |                       |             |
|------------------|-----------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                  |           | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS        |           |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar | 90        | 5                         | 33          | --                 | --                      | --                 | --         | --     | --                       | 46                    | 6           |
| Total            | 90        | 5                         | 33          | --                 | --                      | --                 | --         | --     | --                       | 46                    | 6           |
| HARDWOODS        |           |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Bur oak          | 4,255     | 6                         | 1,675       | --                 | 179                     | 312                | --         | --     | 2,055                    | 28                    | --          |
| Select white oak | 2,041     | 53                        | 1,797       | 6                  | 25                      | 50                 | --         | --     | 81                       | 29                    | --          |
| Other white oak  | 460       | 3                         | 232         | 186                | 36                      | --                 | --         | --     | --                       | 3                     | --          |
| Select red oak   | 7,275     | --                        | 5,431       | 40                 | 71                      | 207                | --         | --     | 1,440                    | 86                    | --          |
| Other red oak    | 1,179     | --                        | 1,193       | 83                 | 15                      | -200               | --         | --     | 46                       | 42                    | --          |
| Select hickory   | 953       | --                        | 412         | 2                  | 23                      | 106                | --         | --     | 392                      | 18                    | --          |
| Other hickory    | 1,060     | --                        | 568         | --                 | --                      | 40                 | --         | --     | 449                      | 3                     | --          |
| Pecan            | 1,113     | --                        | 887         | --                 | --                      | 187                | --         | --     | 9                        | 30                    | --          |
| Hard maple       | 607       | --                        | 538         | --                 | --                      | 47                 | --         | --     | --                       | 22                    | --          |
| Soft maple       | 3,170     | --                        | 219         | --                 | --                      | 1,945              | 13         | --     | 982                      | 11                    | --          |
| Ash              | 4,768     | --                        | 296         | --                 | 29                      | 3,035              | 47         | 14     | 1,309                    | 27                    | 11          |
| Cottonwood       | 8,773     | --                        | 125         | --                 | 24                      | 456                | 7,600      | 60     | 350                      | 51                    | 107         |
| Basswood         | 360       | --                        | 170         | --                 | 86                      | 32                 | --         | --     | 14                       | 58                    | --          |
| Elm              | -2,234    | 1                         | -126        | --                 | 81                      | -419               | 18         | --     | -1,964                   | 160                   | 15          |
| Black walnut     | 5,911     | 31                        | 679         | --                 | 391                     | 1,040              | 396        | --     | 3,226                    | 148                   | --          |
| Willow           | 2,742     | --                        | -1          | --                 | --                      | 2,493              | 106        | 80     | 23                       | 13                    | 28          |
| Boxelder         | 1,642     | --                        | 9           | --                 | 367                     | 921                | 38         | --     | 307                      | --                    | --          |
| Hackberry        | 13,246    | --                        | 620         | 6                  | 1,336                   | 2,295              | 92         | --     | 8,774                    | 59                    | 64          |
| Sycamore         | 2,403     | --                        | 489         | --                 | 36                      | 558                | 27         | --     | 1,219                    | 66                    | 8           |
| Other hardwoods  | 4,223     | --                        | 421         | 5                  | 107                     | 1,660              | 12         | --     | 1,087                    | 914                   | 17          |
| Total            | 63,947    | 94                        | 15,634      | 328                | 2,806                   | 14,765             | 8,349      | 154    | 19,799                   | 1,768                 | 250         |
| All species      | 64,037    | 99                        | 15,667      | 328                | 2,806                   | 14,765             | 8,349      | 154    | 19,799                   | 1,814                 | 256         |

<sup>1/</sup> International 1/4-inch rule.

Table 75.--Net annual growth of growing stock on commercial forest land by forest type and stand-age class, Kansas, 1980  
(In thousand cubic feet)

| Forest type               | All<br>classes | Stand-age class (years) |       |       |       |       |       |       |       |       |        |         |         |      |
|---------------------------|----------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|------|
|                           |                | 0-10                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-140 | 141+ |
| Eastern redcedar-hardwood | 183            | 38                      | 70    | --    | -25   | --    | 64    | --    | --    | --    | --     | --      | 36      | --   |
| Oak-hickory               | 5,211          | 54                      | 140   | 406   | 576   | 621   | 711   | 815   | 789   | 300   | 439    | 236     | 109     | 15   |
| Post-blackjack oak        | 577            | 3                       | 2     | -1    | 101   | 362   | 10    | 6     | 7     | 48    | --     | 39      | --      | --   |
| Upland plains hardwoods   | 1,317          | 33                      | 178   | 266   | 220   | 144   | 222   | 164   | 23    | 26    | --     | 7       | 34      | --   |
| Elm-ash-cottonwood        | 6,110          | 121                     | 594   | 215   | 672   | 291   | 1,466 | 1,109 | 952   | 183   | 191    | 316     | --      | --   |
| Cottonwood                | 2,359          | 6                       | 2     | 119   | 176   | 191   | 305   | 714   | 241   | 129   | 315    | 161     | --      | --   |
| Willow                    | 45             | 2                       | 29    | 10    | --    | --    | 4     | --    | --    | --    | --     | --      | --      | --   |
| Lowland plains hardwoods  | 6,278          | 91                      | 384   | 181   | 555   | 227   | 1,142 | 1,555 | 1,180 | 469   | 319    | 119     | 10      | 46   |
| Upland elm-ash-locust     | 1,038          | 165                     | 193   | 139   | 215   | 16    | 42    | 42    | 123   | 40    | 38     | --      | 25      | --   |
| Nonstocked                | 112            | 15                      | 7     | 25    | 13    | --    | 40    | 5     | 6     | 1     | --     | --      | --      | --   |
| All types                 | 23,230         | 528                     | 1,599 | 1,360 | 2,503 | 1,852 | 4,006 | 4,410 | 3,321 | 1,196 | 1,302  | 878     | 214     | 61   |

Table 76.--Net annual growth of sawtimber on commercial forest land by forest type and stand-age class, Kansas, 1980  
(In thousand board feet)<sup>1/</sup>

| Forest type               | All<br>classes | Stand-age class (years) |       |       |       |       |        |        |       |       |        |         |         |      |
|---------------------------|----------------|-------------------------|-------|-------|-------|-------|--------|--------|-------|-------|--------|---------|---------|------|
|                           |                | 0-10                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60  | 61-70  | 71-80 | 81-90 | 91-100 | 101-120 | 121-140 | 141+ |
| Eastern redcedar-hardwood | 99             | 48                      | 16    | --    | 16    | --    | -57    | --     | --    | --    | --     | --      | 76      | --   |
| Oak-hickory               | 15,667         | 521                     | 8     | 946   | 1,855 | 1,237 | 1,988  | 2,049  | 2,556 | 1,236 | 2,194  | 743     | 288     | 46   |
| Post-blackjack oak        | 328            | 7                       | --    | --    | 11    | 113   | 14     | 9      | -19   | 112   | --     | 81      | --      | --   |
| Upland plains hardwoods   | 2,806          | 23                      | 165   | 124   | 929   | 87    | 390    | 868    | 73    | 64    | --     | 20      | 63      | --   |
| Elm-ash-cottonwood        | 14,765         | 209                     | 502   | 709   | 460   | 1,558 | 4,620  | 3,588  | 1,698 | 126   | 927    | 368     | --      | --   |
| Cottonwood                | 8,349          | --                      | 8     | 320   | -16   | 440   | 1,675  | 2,911  | 1,204 | 371   | 954    | 482     | --      | --   |
| Willow                    | 154            | 8                       | 113   | 11    | --    | --    | 22     | --     | --    | --    | --     | --      | --      | --   |
| Lowland plains hardwoods  | 19,799         | 273                     | 357   | 569   | 1,912 | 1,095 | 3,821  | 5,380  | 3,377 | 1,552 | 853    | 493     | 30      | 87   |
| Upland elm-ash-locust     | 1,814          | 202                     | 216   | 274   | 180   | 26    | 481    | 97     | 70    | 110   | 99     | --      | 59      | --   |
| Nonstocked                | 256            | 76                      | 13    | --    | 17    | --    | 105    | 28     | 14    | 3     | --     | --      | --      | --   |
| All types                 | 64,037         | 1,367                   | 1,398 | 2,953 | 5,364 | 4,556 | 13,059 | 14,930 | 8,973 | 3,574 | 5,027  | 2,187   | 516     | 133  |

<sup>1/</sup>International 1/4-inch rule.

Table 77.--Net annual growth of growing stock on commercial forest land by forest type, stand-size class, and basal-area class, Kansas, 1980  
(In thousand cubic feet)

| Forest type and stand-size class | All classes | Basal-area class (square feet per acre) |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
|----------------------------------|-------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|---------|------|-----|
|                                  |             | 0-10                                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-150 | 151-180 | 181+ |     |
| Eastern redcedar-hardwood        |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 82          | --                                      | --    | --    | --    | --    | --    | --    | --    | --    | --     | 82      | --      | --      | --   | --  |
| Poletimber                       | -7          | --                                      | --    | --    | --    | --    | -25   | 18    | --    | --    | --     | --      | --      | --      | --   | --  |
| Sapling & seedling               | 108         | --                                      | 7     | 9     | 6     | 20    | 66    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All stands                       | 183         | --                                      | 7     | 9     | 6     | 20    | 66    | -25   | 18    | --    | --     | 82      | --      | --      | --   | --  |
| Oak-hickory                      |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 2,831       | --                                      | --    | 36    | 16    | 188   | 223   | 284   | 265   | 810   | 230    | 640     | 139     | --      | --   | --  |
| Poletimber                       | 2,005       | --                                      | --    | --    | -1    | 36    | 176   | 271   | 414   | 257   | 84     | 627     | 141     | --      | --   | --  |
| Sapling & seedling               | 375         | -37                                     | -1    | 101   | 8     | 214   | 39    | 22    | 1     | 25    | 3      | --      | --      | --      | --   | --  |
| All stands                       | 5,211       | -37                                     | -1    | 137   | 23    | 438   | 438   | 577   | 680   | 1,092 | 317    | 1,267   | 280     | --      | --   | --  |
| Post-blackjack oak               |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 79          | --                                      | --    | -20   | --    | --    | 15    | 6     | 47    | 31    | --     | --      | --      | --      | --   | --  |
| Poletimber                       | 438         | --                                      | --    | --    | --    | --    | --    | --    | 35    | 83    | 91     | 210     | 19      | --      | --   | --  |
| Sapling & seedling               | 60          | --                                      | --    | 2     | --    | --    | 3     | 3     | --    | --    | 52     | --      | --      | --      | --   | --  |
| All stands                       | 577         | --                                      | --    | -18   | --    | --    | 18    | 9     | 82    | 114   | 143    | 210     | 19      | --      | --   | --  |
| Upland plains hardwoods          |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 466         | --                                      | --    | --    | 16    | 30    | 27    | 31    | 144   | 131   | --     | --      | 87      | --      | --   | --  |
| Poletimber                       | 721         | --                                      | --    | 5     | --    | 18    | 143   | 109   | 9     | 119   | 154    | 164     | --      | --      | --   | --  |
| Sapling & seedling               | 130         | --                                      | --    | 12    | 9     | 25    | --    | 63    | 6     | 15    | --     | --      | --      | --      | --   | --  |
| All stands                       | 1,317       | --                                      | --    | 17    | 25    | 73    | 170   | 203   | 159   | 265   | 154    | 164     | 87      | --      | --   | --  |
| Elm-ash-cottonwood               |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 4,270       | --                                      | --    | 50    | 71    | 251   | 184   | 330   | 696   | 245   | 479    | 490     | 924     | 550     | --   | --  |
| Poletimber                       | 1,072       | --                                      | --    | -4    | --    | 42    | 147   | 112   | 61    | 114   | 13     | 587     | --      | --      | --   | --  |
| Sapling & seedling               | 768         | -24                                     | 7     | 93    | 145   | 401   | 97    | -71   | 85    | 7     | 28     | --      | --      | --      | --   | --  |
| All stands                       | 6,110       | -24                                     | 7     | 139   | 216   | 694   | 428   | 371   | 842   | 366   | 520    | 1,077   | 924     | 550     | --   | --  |
| Cottonwood                       |             |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                        | 2,060       | --                                      | 4     | 13    | --    | 61    | 104   | --    | 305   | 163   | 161    | 483     | 289     | 269     | 208  | 208 |
| Poletimber                       | 261         | --                                      | --    | --    | --    | --    | 89    | --    | 9     | --    | 163    | --      | --      | --      | --   | --  |
| Sapling & seedling               | 38          | --                                      | 2     | --    | 6     | --    | --    | --    | --    | 30    | --     | --      | --      | --      | --   | --  |
| All stands                       | 2,359       | --                                      | 6     | 13    | 6     | 61    | 193   | --    | 314   | 193   | 324    | 483     | 289     | 269     | 208  | 208 |

(Table 77 continued on next page)

(Table 77 continued)

| Forest type and<br>stand-size class | All<br>classes | Basal-area class (square feet per acre) |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
|-------------------------------------|----------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|---------|------|-----|
|                                     |                | 0-10                                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-150 | 151-180 | 181+ |     |
| Willow                              |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 4              | --                                      | --    | --    | --    | --    | --    | --    | --    | --    | --     | 4       | --      | --      | --   | --  |
| Poletimber                          | 10             | --                                      | --    | 10    | --    | --    | --    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| Sapling & seedling                  | 31             | 2                                       | --    | --    | --    | --    | 29    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 45             | 2                                       | --    | 10    | --    | --    | 29    | --    | --    | --    | --     | 4       | --      | --      | --   | --  |
| Lowland plains hardwoods            |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 4,759          | --                                      | --    | 12    | 62    | 208   | 632   | 364   | 658   | 825   | 492    | 1,221   | 285     | --      | --   | --  |
| Poletimber                          | 1,138          | --                                      | 18    | 24    | --    | --    | 111   | 80    | 181   | 115   | 87     | 522     | --      | --      | --   | --  |
| Sapling & seedling                  | 381            | --                                      | 10    | 8     | 61    | 196   | 49    | 19    | 38    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 6,278          | --                                      | 28    | 44    | 123   | 404   | 792   | 463   | 877   | 940   | 579    | 1,743   | 285     | --      | --   | --  |
| Upland elm-ash-locust               |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 272            | --                                      | --    | 3     | 4     | 7     | 64    | 47    | 50    | 70    | 27     | --      | --      | --      | --   | --  |
| Poletimber                          | 388            | --                                      | --    | --    | 9     | --    | 27    | 135   | 21    | 41    | 26     | 129     | --      | --      | --   | --  |
| Sapling & seedling                  | 378            | -2                                      | 95    | 36    | 17    | 94    | 48    | 23    | 46    | 16    | 5      | --      | --      | --      | --   | --  |
| All stands                          | 1,038          | -2                                      | 95    | 39    | 30    | 101   | 139   | 205   | 117   | 127   | 58     | 129     | --      | --      | --   | --  |
| Nonstocked                          | 112            | 2                                       | 44    | 4     | 15    | 32    | 15    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All types                           |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 14,823         | --                                      | 4     | 94    | 169   | 745   | 1,249 | 1,062 | 2,165 | 2,275 | 1,389  | 2,920   | 1,724   | 819     | 208  | 208 |
| Poletimber                          | 6,026          | --                                      | 18    | 35    | 8     | 96    | 693   | 682   | 748   | 729   | 618    | 2,239   | 160     | --      | --   | --  |
| Sapling & seedling                  | 2,269          | -61                                     | 120   | 261   | 252   | 950   | 331   | 59    | 176   | 93    | 88     | --      | --      | --      | --   | --  |
| Nonstocked                          | 112            | 2                                       | 44    | 4     | 15    | 32    | 15    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 23,230         | -59                                     | 186   | 394   | 444   | 1,823 | 2,288 | 1,803 | 3,089 | 3,097 | 2,095  | 5,159   | 1,884   | 819     | 208  | 208 |

Table 78.--Net annual growth of sawtimber on commercial forest land by forest type, stand-size class, and basal-area class, Kansas, 1980  
(In thousand board feet)<sup>1/</sup>

| Forest type and<br>stand-size class | All<br>classes | Basal-area class (square feet per acre) |       |       |       |       |       |       |       |       |        |         |         |         |      |
|-------------------------------------|----------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|---------|------|
|                                     |                | 0-10                                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-150 | 151-180 | 181+ |
| Eastern redcedar-hardwood           |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | --             | --                                      | --    | --    | --    | --    | --    | --    | --    | --    | --     | --      | --      | --      | --   |
| Poletimber                          | 35             | --                                      | --    | --    | --    | --    | 16    | 19    | --    | --    | --     | --      | --      | --      | --   |
| Sapling & seedling                  | 64             | --                                      | 17    | 10    | 30    | 7     | --    | --    | --    | --    | --     | --      | --      | --      | --   |
| All stands                          | 99             | --                                      | 17    | 10    | 30    | 7     | 16    | 19    | --    | --    | --     | --      | --      | --      | --   |
| Oak-hickory                         |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | 11,265         | --                                      | --    | --    | 66    | 1,329 | 1,180 | 1,191 | 1,273 | 2,974 | 664    | 2,162   | 426     | --      | --   |
| Poletimber                          | 3,840          | --                                      | --    | --    | --    | 29    | 253   | 253   | 515   | 857   | 159    | 1,643   | 131     | --      | --   |
| Sapling & seedling                  | 562            | -204                                    | -3    | 74    | -165  | 765   | 85    | 50    | -75   | 27    | 8      | --      | --      | --      | --   |
| All stands                          | 15,667         | -204                                    | -3    | 74    | -99   | 2,123 | 1,518 | 1,494 | 1,713 | 3,858 | 831    | 3,805   | 557     | --      | --   |
| Post-blackjack oak                  |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | 153            | --                                      | --    | -60   | --    | --    | 26    | /     | 11    | 97    | 79     | --      | --      | --      | --   |
| Poletimber                          | 164            | --                                      | --    | --    | --    | --    | --    | --    | 31    | 41    | 78     | 14      | --      | --      | --   |
| Sapling & seedling                  | 11             | --                                      | --    | --    | --    | --    | 4     | 7     | --    | --    | --     | --      | --      | --      | --   |
| All stands                          | 328            | --                                      | --    | -60   | --    | --    | 30    | 18    | 128   | 120   | 78     | 14      | --      | --      | --   |
| Upland plains hardwoods             |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | 1,439          | --                                      | --    | --    | 102   | 95    | 52    | 81    | 201   | 344   | --     | --      | 564     | --      | --   |
| Poletimber                          | 1,274          | --                                      | --    | --    | --    | 47    | 60    | 56    | --    | 436   | 106    | 569     | --      | --      | --   |
| Sapling & seedling                  | 93             | --                                      | --    | --    | 42    | 19    | --    | --    | 4     | 28    | --     | --      | --      | --      | --   |
| All stands                          | 2,806          | --                                      | --    | --    | 144   | 161   | 112   | 137   | 205   | 808   | 106    | 569     | 564     | --      | --   |
| Elm-ash-cottonwood                  |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | 12,797         | --                                      | --    | 219   | 334   | 1,398 | 509   | 1,070 | 1,908 | 1,011 | 728    | 1,576   | 2,419   | 1,625   | --   |
| Poletimber                          | 1,023          | --                                      | --    | -4    | --    | 42    | 198   | 134   | 97    | 144   | 15     | 397     | --      | --      | --   |
| Sapling & seedling                  | 945            | -121                                    | 10    | 246   | 147   | 830   | 197   | -536  | 13    | 30    | 129    | --      | --      | --      | --   |
| All stands                          | 14,765         | -121                                    | 10    | 461   | 481   | 2,270 | 904   | 668   | 2,018 | 1,185 | 872    | 1,973   | 2,419   | 1,625   | --   |
| Cottonwood                          |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |
| Sawtimber                           | 8,059          | --                                      | 22    | 36    | --    | 170   | 352   | --    | 1,704 | 469   | 373    | 1,654   | 1,295   | 1,191   | 793  |
| Poletimber                          | 273            | --                                      | --    | --    | --    | --    | 311   | --    | -38   | --    | --     | --      | --      | --      | --   |
| Sapling & seedling                  | 17             | --                                      | 8     | --    | --    | --    | --    | --    | --    | 9     | --     | --      | --      | --      | --   |
| All stands                          | 8,349          | --                                      | 30    | 36    | --    | 170   | 663   | --    | 1,666 | 478   | 373    | 1,654   | 1,295   | 1,191   | 793  |

<sup>1/</sup> International 1/4-inch rule.

(Table 78 continued)

| Forest type and<br>stand-size class | All<br>classes | Basal-area class (square feet per acre) |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
|-------------------------------------|----------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|---------|---------|------|-----|
|                                     |                | 0-10                                    | 11-20 | 21-30 | 31-40 | 41-50 | 51-60 | 61-70 | 71-80 | 81-90 | 91-100 | 101-120 | 121-150 | 151-180 | 181+ |     |
| Willow                              |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 22             | --                                      | --    | --    | --    | --    | --    | --    | --    | --    | --     | 22      | --      | --      | --   | --  |
| Poletimber                          | 11             | --                                      | --    | 11    | --    | --    | --    | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| Sapling & seedling                  | 121            | 8                                       | --    | --    | --    | --    | 113   | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 154            | 8                                       | --    | 11    | --    | --    | 113   | --    | --    | --    | --     | 22      | --      | --      | --   | --  |
| Lowland plains hardwood             |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 15,423         | --                                      | --    | 48    | 300   | 693   | 1,596 | 1,236 | 1,600 | 2,178 | 2,072  | 4,594   | 1,106   | --      | --   | --  |
| Poletimber                          | 3,353          | --                                      | --    | 19    | --    | --    | 1,123 | 412   | 799   | 444   | 20     | 536     | --      | --      | --   | --  |
| Sapling & seedling                  | 1,023          | --                                      | 45    | -6    | 159   | 470   | 149   | 159   | 47    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 19,799         | --                                      | 45    | 61    | 459   | 1,163 | 2,868 | 1,807 | 2,446 | 2,622 | 2,092  | 5,130   | 1,106   | --      | --   | --  |
| Upland elm-ash-flocust              |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 921            | --                                      | --    | 8     | 10    | 12    | 30    | 116   | 141   | 537   | 67     | --      | --      | --      | --   | --  |
| Poletimber                          | 417            | --                                      | --    | --    | 195   | --    | 53    | 83    | 9     | 3     | 61     | 13      | --      | --      | --   | --  |
| Sapling & seedling                  | 476            | --                                      | 65    | 59    | 75    | 135   | 87    | --    | 31    | 11    | 13     | --      | --      | --      | --   | --  |
| All stands                          | 1,814          | --                                      | 65    | 67    | 280   | 147   | 170   | 199   | 181   | 551   | 141    | 13      | --      | --      | --   | --  |
| Nonstocked                          | 256            | --                                      | 159   | 8     | 34    | 50    | 5     | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All types                           |                |   |       |       |       |       |       |       |       |       |        |         |         |         |      |     |
| Sawtimber                           | 50,079         | --                                      | 22    | 251   | 812   | 3,697 | 3,745 | 3,705 | 6,924 | 7,592 | 3,904  | 10,008  | 5,810   | 2,816   | 793  | 793 |
| Poletimber                          | 10,390         | --                                      | --    | 26    | 195   | 118   | 1,998 | 954   | 1,432 | 1,925 | 439    | 3,172   | 131     | --      | --   | --  |
| Sapling & seedling                  | 3,312          | -317                                    | 125   | 390   | 268   | 2,249 | 642   | -320  | 20    | 105   | 150    | --      | --      | --      | --   | --  |
| Nonstocked                          | 256            | --                                      | 159   | 8     | 34    | 50    | 5     | --    | --    | --    | --     | --      | --      | --      | --   | --  |
| All stands                          | 64,037         | -317                                    | 306   | 675   | 1,309 | 6,114 | 6,390 | 4,339 | 8,376 | 9,622 | 4,493  | 13,180  | 5,941   | 2,816   | 793  | 793 |

Table 79.--Net annual growth of growing stock on wooded strips  
by species group and Forest Survey Unit, Kansas, 1980

(In thousand cubic feet)

| Species group    | All<br>Units | Forest Survey Unit        |                           |                 |
|------------------|--------------|---------------------------|---------------------------|-----------------|
|                  |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS        |              |                           |                           |                 |
| Eastern redcedar | 107          | 11                        | --                        | 96              |
| Total            | 107          | 11                        | --                        | 96              |
| HARDWOODS        |              |                           |                           |                 |
| Bur oak          | 157          | 11                        | 21                        | 125             |
| Select white oak | 41           | --                        | 41                        | --              |
| Other white oak  | --           | --                        | --                        | --              |
| Select red oak   | 45           | 8                         | 37                        | --              |
| Other red oak    | 24           | 9                         | 15                        | --              |
| Select hickory   | 9            | 8                         | 1                         | --              |
| Other hickory    | 22           | 7                         | 15                        | --              |
| Pecan            | 10           | --                        | 10                        | --              |
| Hard maple       | --           | --                        | --                        | --              |
| Soft maple       | 120          | 95                        | 25                        | --              |
| Ash              | 360          | 96                        | 70                        | 194             |
| Cottonwood       | -32          | 92                        | -316                      | 192             |
| Basswood         | 26           | 26                        | --                        | --              |
| Elm              | 199          | 128                       | 66                        | 5               |
| Black walnut     | 107          | 75                        | 32                        | --              |
| Willow           | 34           | 20                        | 6                         | 8               |
| Boxelder         | 99           | 71                        | 28                        | --              |
| Hackberry        | 840          | 201                       | 411                       | 228             |
| Sycamore         | 88           | 53                        | 35                        | --              |
| Other hardwoods  | 196          | 153                       | 43                        | --              |
| Total            | 2,345        | 1,053                     | 540                       | 752             |
| All species      | 2,452        | 1,064                     | 540                       | 848             |

Table 80.--Net annual growth of sawtimber on wooded strips  
by species group and Forest Survey Unit, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group    | Forest Survey Unit |                           |                           |                 |
|------------------|--------------------|---------------------------|---------------------------|-----------------|
|                  | All<br>Units       | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS        |                    |                           |                           |                 |
| Eastern redcedar | 53                 | --                        | --                        | 53              |
| Total            | 53                 | --                        | --                        | 53              |
| HARDWOODS        |                    |                           |                           |                 |
| Bur oak          | 581                | 36                        | 81                        | 464             |
| Select white oak | --                 | --                        | --                        | --              |
| Other white oak  | --                 | --                        | --                        | --              |
| Select red oak   | 99                 | --                        | 99                        | --              |
| Other red oak    | 78                 | 52                        | 26                        | --              |
| Select hickory   | --                 | --                        | --                        | --              |
| Other hickory    | 20                 | --                        | 20                        | --              |
| Pecan            | 28                 | --                        | 28                        | --              |
| Hard maple       | --                 | --                        | --                        | --              |
| Soft maple       | 221                | 174                       | 47                        | --              |
| Ash              | 1,272              | 865                       | 90                        | 317             |
| Cottonwood       | 1,806              | 802                       | -624                      | 1,628           |
| Basswood         | 12                 | 12                        | --                        | --              |
| Elm              | 154                | 72                        | 82                        | --              |
| Black walnut     | 180                | 137                       | 43                        | --              |
| Willow           | 1,690              | 531                       | 27                        | 1,132           |
| Boxelder         | 159                | 44                        | 115                       | --              |
| Hackberry        | 2,178              | 730                       | 1,173                     | 275             |
| Sycamore         | 186                | 60                        | 126                       | --              |
| Other hardwoods  | 488                | 356                       | 132                       | --              |
| Total            | 9,152              | 3,871                     | 1,465                     | 3,816           |
| All species      | 9,205              | 3,871                     | 1,465                     | 3,869           |

<sup>1/</sup> International 1/4-inch rule.



Table 81.--Timber removals from growing stock on commercial forest land, by species group and Forest Survey Unit, Kansas, 1980

(In thousand cubic feet)

| Species group                 | All<br>Units | Forest Survey Unit        |                           |                 |
|-------------------------------|--------------|---------------------------|---------------------------|-----------------|
|                               |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS                     |              |                           |                           |                 |
| Eastern redcedar              | 89           | 40                        | 14                        | 35              |
| Total                         | 89           | 40                        | 14                        | 35              |
| HARDWOODS                     |              |                           |                           |                 |
| Bur oak                       | 1,303        | 604                       | 360                       | 339             |
| Select white oak              | 700          | 434                       | 266                       | --              |
| Other white oak               | 480          | 41                        | 439                       | --              |
| Select red oak                | 1,195        | 573                       | 604                       | 18              |
| Other red oak                 | 703          | 341                       | 362                       | --              |
| Select hickory                | 168          | 115                       | 53                        | --              |
| Other hickory                 | 106          | 58                        | 48                        | --              |
| Pecan                         | 85           | --                        | 85                        | --              |
| Hard maple                    | 15           | 3                         | 12                        | --              |
| Soft maple                    | 500          | 201                       | 297                       | 2               |
| Ash                           | 1,629        | 451                       | 888                       | 290             |
| Cottonwood                    | 1,935        | 893                       | 559                       | 483             |
| Basswood                      | 17           | 17                        | --                        | --              |
| Elm                           | 685          | 280                       | 337                       | 68              |
| Black walnut                  | 1,307        | 787                       | 508                       | 12              |
| Hackberry                     | 1,220        | 437                       | 672                       | 111             |
| Sycamore                      | 320          | 70                        | 237                       | 13              |
| Other hardwoods <sup>1/</sup> | 1,526        | 694                       | 530                       | 302             |
| Total                         | 13,894       | 5,999                     | 6,257                     | 1,638           |
| All species                   | 13,983       | 6,039                     | 6,271                     | 1,673           |

<sup>1/</sup>Includes willow and boxelder species groups.

Table 82.--Timber removals from sawtimber on commercial forest land, by species group and Forest Survey Unit, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group                 | All<br>Units | Forest Survey Unit        |                           |                 |
|-------------------------------|--------------|---------------------------|---------------------------|-----------------|
|                               |              | North-<br>eastern<br>Unit | South-<br>eastern<br>Unit | Western<br>Unit |
| SOFTWOODS                     |              |                           |                           |                 |
| Eastern redcedar              | 324          | 132                       | 30                        | 162             |
| Total                         | 324          | 132                       | 30                        | 162             |
| HARDWOODS                     |              |                           |                           |                 |
| Bur oak                       | 4,771        | 2,002                     | 1,721                     | 1,048           |
| Select white oak              | 1,881        | 1,203                     | 678                       | --              |
| Other white oak               | 830          | 94                        | 736                       | --              |
| Select red oak                | 3,529        | 1,620                     | 1,832                     | 77              |
| Other red oak                 | 2,199        | 1,082                     | 1,117                     | --              |
| Select hickory                | 527          | 344                       | 183                       | --              |
| Other hickory                 | 257          | 157                       | 100                       | --              |
| Pecan                         | 394          | 4                         | 389                       | 1               |
| Hard maple                    | 41           | 8                         | 33                        | --              |
| Soft maple                    | 2,126        | 699                       | 1,422                     | 5               |
| Ash                           | 5,484        | 1,538                     | 3,058                     | 888             |
| Cottonwood                    | 9,154        | 4,334                     | 3,146                     | 1,674           |
| Basswood                      | 66           | 65                        | 1                         | --              |
| Elm                           | 2,538        | 936                       | 1,362                     | 240             |
| Black walnut                  | 8,281        | 4,977                     | 3,204                     | 100             |
| Hackberry                     | 4,890        | 1,585                     | 2,879                     | 426             |
| Sycamore                      | 1,611        | 321                       | 1,220                     | 70              |
| Other hardwoods <sup>2/</sup> | 4,350        | 1,951                     | 1,504                     | 895             |
| Total                         | 52,929       | 22,920                    | 24,585                    | 5,424           |
| All species                   | 53,253       | 23,052                    | 24,615                    | 5,586           |

<sup>1/</sup>International 1/4-inch rule.

<sup>2/</sup>Includes willow and boxelder species groups.

Table 83.--Timber removals<sup>1/</sup> from growing stock and sawtimber on commercial forest land by species group, Kansas, 1964 and 1980

| Species group                 | Growing stock       |        | Sawtimber                         |        |
|-------------------------------|---------------------|--------|-----------------------------------|--------|
|                               | 1964 <sup>2/</sup>  | 1980   | 1964 <sup>2/</sup>                | 1980   |
|                               | Thousand cubic feet |        | Thousand board feet <sup>3/</sup> |        |
| SOFTWOODS                     |                     |        |                                   |        |
| Eastern redcedar              | 21                  | 89     | --                                | 324    |
| Total                         | 21                  | 89     | --                                | 324    |
| HARDWOODS                     |                     |        |                                   |        |
| Bur oak                       | 953                 | 1,303  | 3,604                             | 4,771  |
| Select white oak              | 120                 | 700    | 502                               | 1,881  |
| Other white oak               | 295                 | 480    | 493                               | 830    |
| Select red oak                | 156                 | 1,195  | 169                               | 3,529  |
| Other red oak                 | 492                 | 703    | 1,455                             | 2,199  |
| Select hickory                | 330                 | 168    | 981                               | 527    |
| Other hickory                 | 209                 | 106    | 479                               | 257    |
| Pecan                         | 72                  | 85     | 257                               | 394    |
| Hard maple                    | 12                  | 15     | 4                                 | 41     |
| Soft maple                    | 667                 | 500    | 2,732                             | 2,126  |
| Ash                           | 607                 | 1,629  | 1,550                             | 5,484  |
| Cottonwood                    | 1,120               | 1,935  | 4,183                             | 9,154  |
| Basswood                      | 19                  | 17     | 11                                | 66     |
| Elm                           | 848                 | 685    | 2,539                             | 2,538  |
| Black walnut                  | 1,180               | 1,307  | 7,240                             | 8,281  |
| Hackberry                     | 626                 | 1,220  | 2,351                             | 4,890  |
| Sycamore                      | 259                 | 320    | 903                               | 1,611  |
| Other hardwoods <sup>4/</sup> | 314                 | 1,526  | 547                               | 4,350  |
| Total                         | 8,279               | 13,894 | 30,000                            | 52,929 |
| All species                   | 8,300               | 13,983 | 30,000                            | 53,253 |

<sup>1/</sup>Removals in 1980 are trend-level removals.

<sup>2/</sup>Figures have been adjusted from those published after the 1966 survey to conform to 1980 volumes because of changes in survey definitions and procedures.

<sup>3/</sup>International 1/4-inch rule.

<sup>4/</sup>Includes willow and boxelder species groups.

Table 84.--Timber removals from growing stock and sawtimber on commercial forest land by item and species category, Kansas, 1980

| Item                | GROWING STOCK                                  |                  |        |               |       |            |        |                 |
|---------------------|--|------------------|--------|---------------|-------|------------|--------|-----------------|
|                     | All species                                    | Species category |        |               |       |            |        |                 |
|                     |  | Softwoods        | Oak    | Elm-hackberry | Ash   | Cottonwood | Walnut | Other hardwoods |
|                     | ----- -Thousand cubic feet-----                |                  |        |               |       |            |        |                 |
| ROUNDWOOD PRODUCTS  |  |                  |        |               |       |            |        |                 |
| Saw logs            | 4,340  | 66               | 730    | 638           | 336   | 940        | 1,138  | 492             |
| Veneer logs         | 72   | --               | 12     | --            | --    | --         | 60     | --              |
| Cooperage logs      | 40   | --               | 40     | --            | --    | --         | --     | --              |
| Fuelwood            | 7,577  | --               | 3,184  | 1,033         | 1,034 | 398        | --     | 1,928           |
| Posts               | 52   | 18               | 19     | --            | --    | --         | --     | 15              |
| Total               | 12,081   | 84               | 3,985  | 1,671         | 1,370 | 1,338      | 1,198  | 2,435           |
| LOGGING RESIDUE     | 755  | --               | 231    | 69            | 137   | 140        | 109    | 69              |
| OTHER REMOVALS      | 1,147  | 5                | 165    | 165           | 122   | 457        | --     | 233             |
| ALL TIMBER REMOVALS | 13,983   | 89               | 4,381  | 1,905         | 1,629 | 1,935      | 1,307  | 2,737           |
|                     | SAWTIMBER                                      |                  |        |               |       |            |        |                 |
|                     | ----- -Thousand board feet <sup>1/</sup> ----- |                  |        |               |       |            |        |                 |
| ROUNDWOOD PRODUCTS  |  |                  |        |               |       |            |        |                 |
| Saw logs            | 26,269   | 312              | 3,358  | 4,017         | 1,991 | 6,107      | 7,431  | 3,053           |
| Veneer logs         | 475  | --               | 59     | --            | --    | --         | 416    | --              |
| Cooperage logs      | 237  | --               | 237    | --            | --    | --         | --     | --              |
| Fuelwood            | 20,895   | --               | 8,773  | 2,850         | 2,851 | 1,097      | --     | 5,324           |
| Posts               | 114  | 11               | 62     | --            | --    | --         | --     | 41              |
| Total               | 47,990   | 323              | 12,489 | 6,867         | 4,842 | 7,204      | 7,847  | 8,418           |
| LOGGING RESIDUE     | 1,637  | --               | 327    | 125           | 315   | 293        | 434    | 143             |
| OTHER REMOVALS      | 3,626  | 1                | 394    | 436           | 327   | 1,657      | --     | 811             |
| ALL TIMBER REMOVALS | 53,253   | 324              | 13,210 | 7,428         | 5,484 | 9,154      | 8,281  | 9,372           |

<sup>1/</sup>International 1/4-inch rule.

Table 85.--Net annual growth and removals of growing stock on commercial forest land by species group, Kansas, 1980

(In thousand cubic feet)

| Species group                 | Net annual growth | Annual timber removals |
|-------------------------------|-------------------|------------------------|
| SOFTWOODS                     |                   |                        |
| Eastern redcedar              | 471               | 89                     |
| Total                         | 471               | 89                     |
| HARDWOODS                     |                   |                        |
| Bur oak                       | 1,251             | 1,303                  |
| Select white oak              | 779               | 700                    |
| Other white oak               | 594               | 480                    |
| Select red oak                | 1,467             | 1,195                  |
| Other red oak                 | 611               | 703                    |
| Select hickory                | 467               | 168                    |
| Other hickory                 | 470               | 106                    |
| Pecan                         | 254               | 85                     |
| Hard maple                    | 94                | 15                     |
| Soft maple                    | 941               | 500                    |
| Ash                           | 1,958             | 1,629                  |
| Cottonwood                    | 2,525             | 1,935                  |
| Basswood                      | 199               | 17                     |
| Elm                           | 678               | 685                    |
| Black walnut                  | 2,167             | 1,307                  |
| Hackberry                     | 4,454             | 1,220                  |
| Sycamore                      | 590               | 320                    |
| Other hardwoods <sup>1/</sup> | 3,260             | 1,526                  |
| Total                         | 22,759            | 13,894                 |
| All species                   | 23,230            | 13,983                 |

<sup>1/</sup> Includes willow and boxelder species groups.

Table 86.--Net annual growth and removals of sawtimber on commercial forest land by species group, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group                 | Net annual growth | Annual timber removals |
|-------------------------------|-------------------|------------------------|
| SOFTWOODS                     |                   |                        |
| Eastern redcedar              | 90                | 324                    |
| Total                         | 90                | 324                    |
| HARDWOODS                     |                   |                        |
| Bur oak                       | 4,255             | 4,771                  |
| Select white oak              | 2,041             | 1,881                  |
| Other white oak               | 460               | 830                    |
| Select red oak                | 7,275             | 3,529                  |
| Other red oak                 | 1,179             | 2,199                  |
| Select hickory                | 953               | 527                    |
| Other hickory                 | 1,060             | 257                    |
| Pecan                         | 1,113             | 394                    |
| Hard maple                    | 607               | 41                     |
| Soft maple                    | 3,170             | 2,126                  |
| Ash                           | 4,768             | 5,484                  |
| Cottonwood                    | 8,773             | 9,154                  |
| Basswood                      | 360               | 66                     |
| Elm                           | -2,234            | 2,538                  |
| Black walnut                  | 5,911             | 8,281                  |
| Hackberry                     | 13,246            | 4,890                  |
| Sycamore                      | 2,403             | 1,611                  |
| Other hardwoods <sup>2/</sup> | 8,607             | 4,350                  |
| Total                         | 63,947            | 52,929                 |
| All species                   | 64,037            | 53,253                 |

<sup>1/</sup> International 1/4-inch rule.

<sup>2/</sup> Includes willow and boxelder species groups.

Table 87.--Net annual growth and removals of growing stock on commercial forest land by ownership class and softwoods and hardwoods, Kansas, 1980

(In thousand cubic feet)

| Ownership class    | Net annual growth |           |           | Annual timber removals |           |           |
|--------------------|-------------------|-----------|-----------|------------------------|-----------|-----------|
|                    | All species       | Softwoods | Hardwoods | All species            | Softwoods | Hardwoods |
| PUBLIC             |                   |           |           |                        |           |           |
| National Forest    | --                | --        | --        | --                     | --        | --        |
| Misc. federal      | 1,020             | 2         | 1,018     | 13                     | --        | 13        |
| Indian             | 25                | --        | 25        | 6                      | --        | 6         |
| State              | 316               | --        | 316       | --                     | --        | --        |
| County & municipal | 152               | --        | 152       | --                     | --        | --        |
| Total              | 1,513             | 2         | 1,511     | 19                     | --        | 19        |
| PRIVATE            |                   |           |           |                        |           |           |
| Farmer and         |                   |           |           |                        |           |           |
| Misc. private      | 21,717            | 469       | 21,248    | 13,964                 | 89        | 13,875    |
| All owners         | 23,230            | 471       | 22,759    | 13,983                 | 89        | 13,894    |

Table 88.--Net annual growth and removals of sawtimber on commercial forest land by ownership class and softwoods and hardwoods, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Ownership class    | Net annual growth |           |           | Annual timber removals |           |           |
|--------------------|-------------------|-----------|-----------|------------------------|-----------|-----------|
|                    | All species       | Softwoods | Hardwoods | All species            | Softwoods | Hardwoods |
| PUBLIC             |                   |           |           |                        |           |           |
| National Forest    | --                | --        | --        | --                     | --        | --        |
| Misc. federal      | 2,658             | --        | 2,658     | 33                     | --        | 33        |
| Indian             | 59                | --        | 59        | 17                     | --        | 17        |
| State              | 866               | --        | 866       | --                     | --        | --        |
| County & municipal | 988               | --        | 988       | --                     | --        | --        |
| Total              | 4,571             | --        | 4,571     | 50                     | --        | 50        |
| PRIVATE            |                   |           |           |                        |           |           |
| Farmer and         |                   |           |           |                        |           |           |
| Misc. private      | 59,466            | 90        | 59,376    | 53,203                 | 324       | 52,879    |
| All owners         | 64,037            | 90        | 63,947    | 53,253                 | 324       | 52,929    |

<sup>1/</sup>International 1/4-inch rule.

Table 89.--Annual mortality of growing stock on commercial forest land by softwoods and hardwoods, Kansas, 1964 and 1980

(In thousand cubic feet)

| Species     | 1964 <sup>1/</sup> | 1980  |
|-------------|--------------------|-------|
| Softwoods   | --                 | 28    |
| Hardwoods   | 3,280              | 3,739 |
| All species | 3,280              | 3,767 |

<sup>1/</sup> Figures have been adjusted from those published after the 1965 survey to conform to 1980 volumes because of changes in survey definitions and procedures.

Table 90.--Annual mortality of growing stock on commercial forest land by species group and cause, Kansas, 1980

(In thousand cubic feet)

| Species group    | All causes | Cause   |         |      |         |         |             | Unknown and other |
|------------------|------------|---------|---------|------|---------|---------|-------------|-------------------|
|                  |            | Insects | Disease | Fire | Animals | Weather | Suppression |                   |
| SOFTWOODS        |            |         |         |      |         |         |             |                   |
| Eastern redcedar | 28         | --      | --      | --   | --      | --      | 28          | --                |
| Total            | 28         | --      | --      | --   | --      | --      | 28          | --                |
| HARDWOODS        |            |         |         |      |         |         |             |                   |
| Bur oak          | 220        | --      | 117     | 4    | --      | 6       | --          | 93                |
| Select white oak | 94         | --      | 22      | --   | 28      | --      | --          | 44                |
| Other white oak  | 46         | --      | --      | 12   | --      | --      | --          | 34                |
| Select red oak   | 210        | --      | 77      | --   | --      | 42      | --          | 91                |
| Other red oak    | 216        | --      | 115     | --   | --      | 52      | --          | 49                |
| Select hickory   | 39         | --      | 29      | --   | --      | --      | --          | 10                |
| Other hickory    | 10         | --      | 7       | --   | --      | --      | --          | 3                 |
| Pecan            | --         | --      | --      | --   | --      | --      | --          | --                |
| Hard maple       | --         | --      | --      | --   | --      | --      | --          | --                |
| Soft maple       | 12         | --      | --      | --   | --      | --      | --          | 12                |
| Ash              | 177        | --      | 20      | --   | --      | 10      | 3           | 144               |
| Cottonwood       | 853        | 122     | 91      | --   | 66      | 153     | --          | 421               |
| Basswood         | 6          | --      | 6       | --   | --      | --      | --          | --                |
| Elm              | 1,283      | 7       | 865     | 8    | --      | 27      | --          | 376               |
| Black walnut     | 223        | --      | 55      | 5    | --      | --      | --          | 163               |
| Willow           | 57         | --      | 17      | --   | --      | --      | --          | 40                |
| Boxelder         | 40         | --      | --      | --   | --      | 35      | 5           | --                |
| Hackberry        | 158        | --      | 93      | 6    | --      | --      | --          | 59                |
| Sycamore         | 69         | --      | --      | --   | --      | --      | --          | 69                |
| Other hardwoods  | 26         | --      | --      | --   | --      | --      | --          | 26                |
| Total            | 3,739      | 129     | 1,514   | 35   | 94      | 325     | 8           | 1,634             |
| All species      | 3,767      | 129     | 1,514   | 35   | 94      | 325     | 36          | 1,634             |

Table 91.--Annual mortality of sawtimber on commercial forest land by species group and cause, Kansas, 1980

(In thousand board feet)<sup>1/</sup>

| Species group    | All causes | Cause   |         |      |         |         |             | Unknown and other |
|------------------|------------|---------|---------|------|---------|---------|-------------|-------------------|
|                  |            | Insects | Disease | Fire | Animals | Weather | Suppression |                   |
| SOFTWOODS        |            |         |         |      |         |         |             |                   |
| Eastern redcedar | 157        | --      | --      | --   | --      | --      | 157         | --                |
| Total            | 157        | --      | --      | --   | --      | --      | 157         | --                |
| HARDWOODS        |            |         |         |      |         |         |             |                   |
| Bur oak          | 484        | --      | 119     | 21   | --      | 28      | --          | 316               |
| Select white oak | 247        | --      | 93      | --   | 133     | --      | --          | 21                |
| Other white oak  | 91         | --      | --      | 23   | --      | --      | --          | 68                |
| Select red oak   | 660        | --      | 356     | --   | --      | 174     | --          | 130               |
| Other red oak    | 1,145      | --      | 624     | --   | --      | 292     | --          | 229               |
| Select hickory   | 71         | --      | 26      | --   | --      | --      | --          | 45                |
| Other hickory    | 34         | --      | 34      | --   | --      | --      | --          | --                |
| Pecan            | --         | --      | --      | --   | --      | --      | --          | --                |
| Hard maple       | --         | --      | --      | --   | --      | --      | --          | --                |
| Soft maple       | 56         | --      | --      | --   | --      | --      | --          | 56                |
| Ash              | 716        | --      | 89      | --   | --      | 48      | --          | 579               |
| Cottonwood       | 2,651      | 614     | 371     | --   | 332     | 459     | --          | 875               |
| Basswood         | --         | --      | --      | --   | --      | --      | --          | --                |
| Elm              | 4,295      | 30      | 2,944   | --   | --      | 126     | --          | 1,195             |
| Black walnut     | 773        | --      | 135     | 26   | --      | --      | --          | 612               |
| Willow           | 85         | --      | 85      | --   | --      | --      | --          | --                |
| Boxelder         | --         | --      | --      | --   | --      | --      | --          | --                |
| Hackberry        | 599        | --      | 397     | 30   | --      | --      | --          | 172               |
| Sycamore         | 195        | --      | --      | --   | --      | --      | --          | 195               |
| Other hardwoods  | 60         | --      | --      | --   | --      | --      | --          | 60                |
| Total            | 12,162     | 644     | 5,273   | 100  | 465     | 1,127   | --          | 4,553             |
| All species      | 12,319     | 644     | 5,273   | 100  | 465     | 1,127   | 157         | 4,553             |

<sup>1/</sup> International 1/4-inch rule.

Table 92.--Annual mortality of growing stock and sawtimber on commercial forest land by ownership class and softwoods and hardwoods, Kansas, 1980

| Ownership class       | Growing stock                  |           |           | Sawtimber                                     |           |           |
|-----------------------|--------------------------------|-----------|-----------|---|-----------|-----------|
|                       | All species                    | Softwoods | Hardwoods | All species                                   | Softwoods | Hardwoods |
|                       | - - - Thousand cubic feet- - - |           |           | - - - Thousand board feet <sup>1/</sup> - - - |           |           |
| National Forest       | --                             | --        | --        | --  | --        | --        |
| Miscellaneous federal | 36                             | --        | 36        | 127   | --        | 127       |
| Indian                | --                             | --        | --        | --  | --        | --        |
| State                 | --                             | --        | --        | --  | --        | --        |
| County and municipal  | --                             | --        | --        | --  | --        | --        |
| Farmer                | 2,027                          | 28        | 1,999     | 7,104   | 157       | 6,947     |
| Misc. private         | 1,704                          | --        | 1,704     | 5,088   | --        | 5,088     |
| All owners            | 3,767                          | 28        | 3,739     | 12,319  | 157       | 12,162    |

<sup>1/</sup> International 1/4-inch rule.



Table 93.--Output of timber products by product, softwoods and hardwoods, and source of material, Kansas, 1980

| Product and soft-<br>woods and hardwoods | Total           |                        | Roundwood products |                        |                 |                        | Plant byproducts |                        |
|--|-----------------|------------------------|--------------------|------------------------|-----------------|------------------------|------------------|------------------------|
|  | No. of<br>units | Thousand<br>cubic feet | No. of<br>units    | Thousand<br>cubic feet | No. of<br>units | Thousand<br>cubic feet | No. of<br>units  | Thousand<br>cubic feet |
| <b>SAW LOGS</b>                          |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | 321             | 66                     | 321                | 66                     | --              | --                     | --               | --                     |
| Hardwood                                 | 31,565          | 5,036                  | 26,789             | 4,274                  | 4,776           | 762                    | --               | --                     |
| Total                                    | 31,886          | 5,102                  | 27,110             | 4,340                  | 4,776           | 762                    | --               | --                     |
| <b>VENEER LOGS</b>                       |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | --              | --                     | --                 | --                     | --              | --                     | --               | --                     |
| Hardwood                                 | 537             | 81                     | 473                | 72                     | 64              | 9                      | --               | --                     |
| Total                                    | 537             | 81                     | 473                | 72                     | 64              | 9                      | --               | --                     |
| <b>COOPERAGE</b>                         |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | --              | --                     | --                 | --                     | --              | --                     | --               | --                     |
| Hardwood                                 | 264             | 44                     | 240                | 40                     | 24              | 4                      | --               | --                     |
| Total                                    | 264             | 44                     | 240                | 40                     | 24              | 4                      | --               | --                     |
| <b>FUELWOOD</b>                          |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | 160             | 11                     | --                 | --                     | --              | --                     | 160              | 11                     |
| Hardwood                                 | 272,926         | 19,098                 | 108,285            | 7,577                  | 146,715         | 10,266                 | 17,926           | 1,255                  |
| Total                                    | 273,086         | 19,109                 | 108,285            | 7,577                  | 146,715         | 10,266                 | 18,086           | 1,266                  |
| <b>POSTS</b>                             |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | 35              | 26                     | 24                 | 18                     | 11              | 8                      | --               | --                     |
| Hardwood                                 | 315             | 177                    | 61                 | 34                     | 254             | 143                    | --               | --                     |
| Total                                    | 350             | 203                    | 85                 | 52                     | 265             | 151                    | --               | --                     |
| <b>OTHER<sup>3/</sup></b>                |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | 6               | 6                      | --                 | --                     | --              | --                     | 6                | 6                      |
| Hardwood                                 | 470             | 470                    | --                 | --                     | --              | --                     | 470              | 470                    |
| Total                                    | 476             | 476                    | --                 | --                     | --              | --                     | 476              | 476                    |
| <b>ALL PRODUCTS</b>                      |                 |                        |                    |                        |                 |                        |                  |                        |
| Softwood                                 | --              | 109                    | --                 | 84                     | --              | 8                      | --               | 17                     |
| Hardwood                                 | --              | 24,906                 | --                 | 11,997                 | --              | 11,184                 | --               | 1,725                  |
| Total                                    | --              | 25,015                 | --                 | 12,081                 | --              | 11,192                 | --               | 1,742                  |

<sup>1/</sup> International 1/4-inch rule.

<sup>2/</sup> Unpeeled, 128 cubic-foot basis.

<sup>3/</sup> Includes charcoal wood, livestock bedding, mulch, and specialty items.

Table 94.--Output of roundwood products by product, softwoods and hardwoods, and source of material, Kansas, 1980  
(In thousand cubic feet)

| Product and soft-woods and hardwoods | All sources | Growing-stock trees |           |            | Rough and rotten trees | Salvable dead trees | Other sources |
|--------------------------------------|-------------|---------------------|-----------|------------|------------------------|---------------------|---------------|
|                                      |             | Total               | Sawtimber | Poletimber |                        |                     |               |
| INDUSTRIAL PRODUCTS                  |             |                     |           |            |                        |                     |               |
| Saw logs                             |             |                     |           |            |                        |                     |               |
| Softwood                             | 66          | 66                  | 66        | --         | --                     | --                  | --            |
| Hardwood                             | 5,036       | 4,274               | 4,243     | 31         | 547                    | 20                  | 195           |
| Subtotal                             | 5,102       | 4,340               | 4,309     | 31         | 547                    | 20                  | 195           |
| Veneer logs                          |             |                     |           |            |                        |                     |               |
| Softwood                             | --          | --                  | --        | --         | --                     | --                  | --            |
| Hardwood                             | 81          | 72                  | 72        | --         | --                     | --                  | 9             |
| Subtotal                             | 81          | 72                  | 72        | --         | --                     | --                  | 9             |
| Cooperage                            |             |                     |           |            |                        |                     |               |
| Softwood                             | --          | --                  | --        | --         | --                     | --                  | --            |
| Hardwood                             | 44          | 40                  | 40        | --         | 4                      | --                  | --            |
| Subtotal                             | 44          | 40                  | 40        | --         | 4                      | --                  | --            |
| Posts (Round and split)              |             |                     |           |            |                        |                     |               |
| Softwood                             | 26          | 18                  | 6         | 12         | --                     | 1                   | 7             |
| Hardwood                             | 177         | 34                  | 24        | 10         | 6                      | --                  | 137           |
| Subtotal                             | 203         | 52                  | 30        | 22         | 6                      | 1                   | 144           |
| All industrial products              |             |                     |           |            |                        |                     |               |
| Softwood                             | 92          | 84                  | 72        | 12         | --                     | 1                   | 7             |
| Hardwood                             | 5,338       | 4,420               | 4,379     | 41         | 557                    | 20                  | 341           |
| Total                                | 5,430       | 4,504               | 4,451     | 53         | 557                    | 21                  | 348           |
| FUELWOOD                             |             |                     |           |            |                        |                     |               |
| Softwood                             | --          | --                  | --        | --         | --                     | --                  | --            |
| Hardwood                             | 17,843      | 7,577               | 4,177     | 3,400      | 3,734                  | 266                 | 6,266         |
| Total                                | 17,843      | 7,577               | 4,177     | 3,400      | 3,734                  | 266                 | 6,266         |
| ALL PRODUCTS                         |             |                     |           |            |                        |                     |               |
| Softwood                             | 92          | 84                  | 72        | 12         | --                     | 1                   | 7             |
| Hardwood                             | 23,181      | 11,997              | 8,556     | 3,441      | 4,291                  | 286                 | 6,607         |
| Total                                | 23,273      | 12,081              | 8,628     | 3,453      | 4,291                  | 287                 | 6,614         |

Table 95.--Timber products from roundwood by species group and product, Kansas, 1980

| Species group                 | All products | Saw logs            |                     | Veneer logs         |                     | Fuelwood |                     | Posts           |                     | Cooperage logs      |                     |
|-------------------------------|--------------|---------------------|---------------------|---------------------|---------------------|----------|---------------------|-----------------|---------------------|---------------------|---------------------|
|                               |              | Thousand cubic feet | Thousand board feet | Thousand cubic feet | Thousand board feet | Cords    | Thousand cubic feet | Thousand pieces | Thousand cubic feet | Thousand board feet | Thousand cubic feet |
| SOFTWOODS                     |              |                     |                     |                     |                     |          |                     |                 |                     |                     |                     |
| Eastern redcedar              | 92           | 321                 | 66                  | --                  | --                  | --       | --                  | 35              | 26                  | --                  | --                  |
| Total                         | 92           | 321                 | 66                  | --                  | --                  | --       | --                  | 35              | 26                  | --                  | --                  |
| HARDWOODS                     |              |                     |                     |                     |                     |          |                     |                 |                     |                     |                     |
| White oak                     | 4,669        | 3,225               | 569                 | 59                  | 12                  | 57,573   | 4,030               | 26              | 14                  | 264                 | 44                  |
| Red oak                       | 3,645        | 2,931               | 521                 | --                  | --                  | 44,427   | 3,111               | 27              | 13                  | --                  | --                  |
| Hickory                       | 545          | 74                  | 11                  | --                  | --                  | 7,650    | 534                 | --              | --                  | --                  | --                  |
| Pecan                         | 57           | 348                 | 57                  | --                  | --                  | --       | --                  | --              | --                  | --                  | --                  |
| Hard maple                    | 25           | --                  | --                  | --                  | --                  | 400      | 25                  | --              | --                  | --                  | --                  |
| Soft maple                    | 779          | 1,543               | 246                 | --                  | --                  | 7,650    | 533                 | --              | --                  | --                  | --                  |
| Ash                           | 2,685        | 2,183               | 367                 | --                  | --                  | 33,150   | 2,318               | --              | --                  | --                  | --                  |
| Cottonwood                    | 1,832        | 6,107               | 940                 | --                  | --                  | 12,750   | 892                 | --              | --                  | --                  | --                  |
| Basswood                      | 18           | 10                  | 1                   | --                  | --                  | 250      | 17                  | --              | --                  | --                  | --                  |
| Elm                           | 1,116        | 1,458               | 222                 | --                  | --                  | 12,750   | 894                 | --              | --                  | --                  | --                  |
| Black walnut                  | 1,609        | 8,955               | 1,362               | 478                 | 69                  | 2,550    | 178                 | --              | --                  | --                  | --                  |
| Hackberry                     | 1,931        | 3,193               | 504                 | --                  | --                  | 20,400   | 1,427               | --              | --                  | --                  | --                  |
| Sycamore                      | 397          | 1,417               | 218                 | --                  | --                  | 2,550    | 179                 | --              | --                  | --                  | --                  |
| Other hardwoods <sup>2/</sup> | 3,873        | 121                 | 18                  | --                  | --                  | 52,900   | 3,705               | 262             | 150                 | --                  | --                  |
| Total                         | 23,181       | 31,565              | 5,036               | 537                 | 81                  | 255,000  | 17,843              | 315             | 177                 | 264                 | 44                  |
| All species                   | 23,273       | 31,886              | 5,102               | 537                 | 81                  | 255,000  | 17,843              | 350             | 203                 | 264                 | 44                  |

<sup>1/</sup>International 1/4-inch rule.

<sup>2/</sup>Includes willow and boxelder species groups.

Table 96.--Volume of primary plant residue by type of use and kind of material, Kansas, 1980

(In thousand cubic feet)

| Type of use                 | Kind of wood residue |          |                      |          |                    |          |          |          |
|-----------------------------|----------------------|----------|----------------------|----------|--------------------|----------|----------|----------|
|                             | Total                |          | Coarse <sup>1/</sup> |          | Fine <sup>2/</sup> |          | Bark     |          |
|                             | Softwood             | Hardwood | Softwood             | Hardwood | Softwood           | Hardwood | Softwood | Hardwood |
| Fiber products              | --                   | 298.1    | --                   | 298.1    | --                 | --       | --       | --       |
| Industrial fuel             | --                   | 677.8    | --                   | 433.3    | --                 | 244.5    | --       | 279.8    |
| Domestic fuel               | 11.2                 | 577.0    | 10.6                 | 536.5    | 0.6                | 40.5     | 3.7      | 335.4    |
| Miscellaneous <sup>3/</sup> | 6.1                  | 469.6    | 0.2                  | 13.0     | 5.9                | 456.6    | 0.1      | 7.2      |
| Not used <sup>4/</sup>      | 6.3                  | 664.8    | 4.1                  | 413.8    | 2.2                | 251.0    | 1.5      | 455.1    |
| Total                       | 23.6                 | 2,687.3  | 14.9                 | 1,694.7  | 8.7                | 992.6    | 5.3      | 1,077.5  |

<sup>1/</sup>Suitable for chipping such as slabs, edgings, veneer cores, etc.

<sup>2/</sup>Not suitable for chipping such as sawdust, veneer clippings, etc.

<sup>3/</sup>Livestock bedding, mulch, small dimension, charcoal, and specialty items.

<sup>4/</sup>Includes residue burned as waste.

Table 97.--All live shrub biomass yields on commercial forest land by species group and forest type, Kansas, 1981  
(In pounds per acre green weight)

| Species             | Forest type               |             |                    |                         |                    |            |        |                          |                       | Non-stocked |
|---------------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|--------|--------------------------|-----------------------|-------------|
|                     | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow | Lowland plains hardwoods | Upland elm-ash locust |             |
| TALL SHRUBS         |                           |             |                    |                         |                    |            |        |                          |                       |             |
| Eastern redcedar    | 244                       | 11          | 2                  | 13                      | 3                  | --         | --     | --                       | 9                     | --          |
| Boxelder            | --                        | --          | --                 | --                      | 13                 | 39         | --     | 10                       | --                    | --          |
| Silver maple        | --                        | --          | --                 | --                      | 10                 | --         | --     | --                       | --                    | --          |
| Sugar maple         | --                        | 3           | --                 | --                      | 2                  | --         | --     | --                       | 5                     | --          |
| Ailanthus           | --                        | 75          | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Bitternut hickory   | --                        | 14          | 5                  | 12                      | --                 | --         | --     | 8                        | --                    | --          |
| Shagbark hickory    | 5                         | 14          | --                 | 2                       | --                 | --         | --     | --                       | 1                     | --          |
| Hackberry           | --                        | 29          | 5                  | 18                      | 20                 | 1          | --     | 107                      | 3                     | 2           |
| Eastern redbud      | --                        | 34          | 20                 | 44                      | 23                 | --         | --     | 9                        | 16                    | --          |
| Roughleaf dogwood   | 1,411                     | 215         | 55                 | 164                     | 253                | 239        | 1,778  | 173                      | 561                   | 92          |
| Hawthorn            | --                        | 12          | --                 | --                      | 14                 | --         | --     | --                       | 3                     | --          |
| White ash           | --                        | 8           | --                 | --                      | --                 | --         | --     | --                       | 4                     | --          |
| Green ash           | --                        | 118         | 1                  | 12                      | 19                 | 82         | --     | 136                      | 15                    | --          |
| Honeylocust         | 1                         | 8           | --                 | 18                      | 29                 | --         | --     | 8                        | 30                    | 6           |
| Black walnut        | --                        | 13          | --                 | 25                      | 3                  | --         | --     | 12                       | 5                     | --          |
| Osage-orange        | --                        | 5           | --                 | 28                      | 1                  | --         | --     | --                       | 7                     | 6           |
| Red mulberry        | --                        | 5           | 2                  | 3                       | 7                  | 37         | 177    | 2                        | 9                     | --          |
| Eastern hophornbeam | --                        | 18          | 4                  | 3                       | --                 | --         | --     | --                       | --                    | --          |
| Eastern cottonwood  | --                        | --          | --                 | --                      | 4                  | --         | --     | --                       | --                    | --          |
| Black cherry        | --                        | 3           | --                 | 11                      | --                 | --         | --     | --                       | 1                     | 3           |
| Chokecherry         | --                        | 11          | --                 | 2                       | 2                  | 30         | --     | 11                       | 4                     | --          |
| Wild plum           | --                        | --          | --                 | --                      | 3                  | --         | --     | 3                        | 2                     | --          |
| Pawpaw              | --                        | 7           | --                 | 15                      | 2                  | --         | --     | 21                       | --                    | --          |
| White oak           | --                        | --          | 46                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Bur oak             | --                        | 4           | 1                  | 1                       | --                 | --         | --     | 4                        | --                    | --          |
| Chinkapin oak       | 24                        | 15          | 1                  | 5                       | --                 | --         | --     | 10                       | 5                     | --          |
| Northern red oak    | 5                         | 8           | 8                  | --                      | --                 | --         | --     | 2                        | 8                     | --          |
| Black oak           | 1                         | 5           | --                 | --                      | --                 | --         | --     | --                       | 10                    | --          |
| Beaked hazel        | 931                       | 32          | --                 | --                      | --                 | --         | --     | 25                       | --                    | --          |
| Prickly ash         | --                        | --          | --                 | 30                      | 58                 | --         | --     | --                       | 3                     | --          |
| Viburnum            | --                        | 5           | --                 | 1                       | --                 | --         | --     | --                       | --                    | --          |
| Elder               | --                        | 6           | --                 | --                      | 19                 | --         | --     | --                       | --                    | --          |
| Sumac               | 39                        | 22          | 28                 | 1                       | 7                  | --         | --     | 4                        | 49                    | 70          |
| Buttonbush          | --                        | --          | --                 | --                      | 2                  | --         | --     | --                       | --                    | --          |
| Wahoo               | --                        | 4           | --                 | --                      | 29                 | --         | 694    | 2                        | --                    | --          |
| Willow              | --                        | --          | --                 | --                      | --                 | --         | --     | 1                        | --                    | 3           |
| Sassafras           | --                        | 2           | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| American basswood   | --                        | 3           | --                 | 15                      | --                 | --         | --     | --                       | --                    | --          |
| American elm        | 46                        | 66          | 22                 | 49                      | 39                 | 2          | --     | 148                      | 108                   | 7           |
| Siberian elm        | --                        | 5           | --                 | --                      | --                 | --         | --     | --                       | --                    | --          |
| Slippery elm        | --                        | 54          | --                 | 21                      | 20                 | 16         | --     | 26                       | 34                    | --          |
| Total               | 2,707                     | 834         | 200                | 493                     | 582                | 474        | 2,649  | 722                      | 892                   | 189         |

(Table 97 continued on next page)

(Table 97 continued)

| Species                       | Forest type                      |                 |                           |                               |                        |            |        |                                |                              |                 |
|-------------------------------|----------------------------------|-----------------|---------------------------|-------------------------------|------------------------|------------|--------|--------------------------------|------------------------------|-----------------|
|                               | Eastern<br>redcedar-<br>hardwood | Oak-<br>hickory | Post-<br>blackjack<br>oak | Upland<br>plains<br>hardwoods | Elm-ash-<br>cottonwood | Cottonwood | Willow | Lowland<br>plains<br>hardwoods | Upland<br>elm-ash-<br>locust | Non-<br>stocked |
| LOW SHRUBS                    |                                  |                 |                           |                               |                        |            |        |                                |                              |                 |
| Virginia creeper              | 2                                | 7               | 3                         | 1                             | --                     | 30         | --     | 3                              | --                           | --              |
| Gooseberry-currant            | --                               | 8               | --                        | --                            | 12                     | 2          | --     | 9                              | 2                            | --              |
| Raspberry-blackberry          | --                               | --              | 1                         | --                            | --                     | --         | 8      | 1                              | 3                            | --              |
| Rose                          | --                               | 3               | --                        | --                            | 1                      | --         | --     | --                             | 6                            | 4               |
| American bladdernut           | --                               | 3               | --                        | --                            | 1                      | --         | --     | --                             | --                           | --              |
| Bilberry-blueberry            | --                               | 2               | --                        | --                            | --                     | --         | --     | --                             | --                           | --              |
| Honeysuckle                   | --                               | --              | --                        | 7                             | 7                      | 13         | --     | 6                              | 2                            | --              |
| Buckbrush                     | 58                               | 119             | 186                       | 166                           | 128                    | 18         | 129    | 150                            | 155                          | 59              |
| Poison ivy                    | --                               | 6               | 2                         | 2                             | 10                     | 58         | --     | 8                              | 4                            | 6               |
| Pipe-vine                     | --                               | --              | 2                         | 1                             | --                     | --         | --     | --                             | --                           | --              |
| Moonseed                      | --                               | 4               | --                        | --                            | 1                      | --         | --     | 3                              | --                           | --              |
| Greenbrier                    | --                               | --              | --                        | --                            | --                     | 3          | --     | 1                              | 1                            | --              |
| Grape                         | --                               | --              | --                        | --                            | --                     | 2          | --     | 2                              | --                           | --              |
| Total                         | 60                               | 152             | 194                       | 177                           | 160                    | 126        | 137    | 183                            | 173                          | 69              |
| All shrub species             | 2,767                            | 986             | 394                       | 670                           | 742                    | 600        | 2,786  | 905                            | 1,065                        | 258             |
| Number of plots <sup>1/</sup> | 20                               | 265             | 26                        | 42                            | 206                    | 32         | 4      | 213                            | 90                           | 33              |

<sup>1/</sup> Number of plots by forest type from which average yields were derived.



Table 99.--All live tree biomass on commercial forest land by species group and forest type, Kansas, 1981  
(In green tons)

| Species               | Forest type |                           |             |                    |                         |                    |            |         |                          |                       |             |
|-----------------------|-------------|---------------------------|-------------|--------------------|-------------------------|--------------------|------------|---------|--------------------------|-----------------------|-------------|
|                       | All types   | Eastern redcedar-hardwood | Oak-hickory | Post-blackjack oak | Upland plains hardwoods | Elm-ash-cottonwood | Cottonwood | Willow  | Lowland plains hardwoods | Upland elm-ash-locust | Non-stocked |
| SOFTWOODS             |             |                           |             |                    |                         |                    |            |         |                          |                       |             |
| Eastern redcedar      | 327,473     | 191,845                   | 40,070      | --                 | 28,064                  | 4,008              | --         | --      | 29,936                   | 28,607                | 4,943       |
| Total                 | 327,473     | 191,845                   | 40,070      | --                 | 28,064                  | 4,008              | --         | --      | 29,936                   | 28,607                | 4,943       |
| HARDWOODS             |             |                           |             |                    |                         |                    |            |         |                          |                       |             |
| Bur oak               | 4,195,728   | 18,006                    | 2,091,706   | 28,289             | 248,662                 | 319,853            | --         | --      | 1,424,444                | 28,772                | 35,996      |
| Select white oak      | 3,063,270   | 73,746                    | 2,581,779   | 3,628              | 82,460                  | 120,304            | --         | --      | 132,779                  | 68,574                | --          |
| Other white oak       | 1,602,916   | 38,832                    | 467,252     | 1,073,883          | 19,513                  | --                 | --         | --      | --                       | 3,436                 | --          |
| Select red oak        | 2,940,607   | 4,037                     | 2,375,982   | 67,344             | 43,040                  | 131,694            | --         | --      | 213,358                  | 101,190               | 3,962       |
| Other red oak         | 1,951,281   | --                        | 1,542,203   | 166,773            | 23,692                  | 79,286             | 1,794      | --      | 95,554                   | 26,937                | 15,042      |
| Select hickory        | 1,276,927   | 7,190                     | 986,708     | 22,309             | 16,241                  | 110,375            | --         | --      | 92,792                   | 37,933                | 3,379       |
| Other hickory         | 926,926     | --                        | 518,191     | 19,908             | 49,021                  | 88,421             | --         | --      | 243,396                  | 7,989                 | --          |
| Pecan                 | 633,788     | --                        | 504,246     | --                 | 7,786                   | 89,917             | --         | --      | 12,575                   | 19,264                | --          |
| Hard maple            | 246,808     | --                        | 147,954     | --                 | --                      | 68,317             | --         | --      | 10,448                   | 20,089                | --          |
| Soft maple            | 1,069,121   | --                        | 20,155      | --                 | --                      | 772,645            | 13,213     | --      | 249,481                  | 10,270                | 3,357       |
| Ash                   | 4,063,618   | 8,210                     | 477,086     | --                 | 58,152                  | 2,492,180          | 85,263     | 11,814  | 685,297                  | 196,554               | 49,062      |
| Cottonwood            | 6,758,532   | 1,560                     | 71,515      | --                 | 32,237                  | 1,729,227          | 4,494,369  | 17,486  | 259,323                  | 102,048               | 50,767      |
| Basswood              | 386,444     | --                        | 171,258     | --                 | 77,858                  | 27,178             | 43,118     | --      | 42,362                   | 24,670                | --          |
| Elm                   | 4,249,130   | 39,858                    | 717,096     | 14,107             | 187,401                 | 1,466,383          | 60,844     | 3,221   | 989,815                  | 631,686               | 138,719     |
| Black walnut          | 3,756,931   | 52,690                    | 766,988     | 17,073             | 401,339                 | 369,970            | 28,655     | --      | 1,932,843                | 178,600               | 8,773       |
| Willow                | 847,383     | --                        | 17,939      | --                 | 2,632                   | 588,569            | 65,544     | 85,509  | 47,907                   | 30,718                | 8,565       |
| Boxelder              | 1,390,074   | --                        | 32,515      | --                 | 17,602                  | 844,819            | 60,639     | 3,657   | 382,291                  | 22,376                | 26,175      |
| Hackberry             | 5,858,598   | 16,942                    | 396,428     | 4,240              | 339,359                 | 977,604            | 51,832     | 358     | 3,865,563                | 171,587               | 34,685      |
| Sycamore              | 1,035,946   | --                        | 146,290     | --                 | 15,292                  | 343,938            | 16,250     | --      | 477,916                  | 30,488                | 5,772       |
| Other hardwoods       | 4,082,630   | 21,463                    | 391,456     | 7,972              | 164,268                 | 1,359,554          | 289,607    | 3,145   | 1,160,155                | 513,686               | 171,324     |
| Noncommercial species | 2,613,645   | 98,496                    | 560,570     | 6,633              | 272,761                 | 717,505            | 1,519      | --      | 507,371                  | 300,481               | 148,309     |
| Total                 | 52,950,303  | 381,030                   | 14,985,317  | 1,432,159          | 2,059,316               | 12,697,739         | 5,212,647  | 125,190 | 12,825,670               | 2,527,348             | 703,887     |
| All species           | 53,277,776  | 572,875                   | 15,025,387  | 1,432,159          | 2,087,380               | 12,701,747         | 5,212,647  | 125,190 | 12,855,606               | 2,555,955             | 708,830     |



Table 100.--All live tree biomass weight by species group and tree biomass component, Kansas, 1981  
(In green tons)

| Species group         | All components | Biomass component  |               |                |           |
|-----------------------|----------------|--------------------|---------------|----------------|-----------|
|                       |                | 1- to 5-inch trees | Growing stock |                | Cull      |
|                       |                |                    | Boles         | Tops and limbs |           |
| SOFTWOODS             |                |                    |               |                |           |
| Eastern redcedar      | 327,473        | 185,195            | 76,966        | 39,582         | 9,224     |
| Total                 | 327,473        | 185,195            | 76,966        | 39,582         | 9,224     |
| HARDWOODS             |                |                    |               |                |           |
| Bur oak               | 4,195,728      | 94,805             | 2,185,284     | 1,090,531      | 323,285   |
| Select white oak      | 3,063,270      | 208,450            | 1,240,484     | 603,806        | 364,748   |
| Other white oak       | 1,602,916      | 302,447            | 722,386       | 337,549        | 90,939    |
| Select red oak        | 2,940,607      | 127,093            | 1,626,511     | 806,614        | 180,520   |
| Other red oak         | 1,951,281      | 113,136            | 995,059       | 513,525        | 135,068   |
| Select hickory        | 1,276,927      | 214,208            | 636,484       | 296,069        | 76,937    |
| Other hickory         | 926,926        | 207,121            | 429,551       | 199,223        | 58,796    |
| Pecan                 | 633,788        | 55,007             | 325,064       | 158,518        | 59,919    |
| Hard maple            | 246,808        | 80,305             | 100,799       | 51,224         | 9,013     |
| Soft maple            | 1,069,121      | 37,415             | 568,119       | 280,018        | 98,492    |
| Ash                   | 4,063,618      | 643,970            | 1,798,134     | 950,412        | 395,050   |
| Cottonwood            | 6,758,532      | 42,901             | 4,089,652     | 1,992,493      | 350,178   |
| Basswood              | 386,444        | 71,834             | 160,590       | 78,287         | 30,579    |
| Elm                   | 4,249,130      | 1,675,863          | 954,679       | 460,438        | 716,885   |
| Black walnut          | 3,756,931      | 462,570            | 1,810,684     | 897,619        | 359,420   |
| Willow                | 847,383        | 70,076             | 363,096       | 182,509        | 129,187   |
| Boxelder              | 1,390,074      | 181,341            | 325,485       | 161,496        | 412,301   |
| Hackberry             | 5,858,598      | 897,608            | 2,696,133     | 1,312,562      | 589,163   |
| Sycamore              | 1,035,946      | 36,229             | 621,590       | 293,367        | 45,665    |
| Other hardwoods       | 4,082,630      | 897,973            | 1,065,951     | 520,732        | 967,516   |
| Noncommercial species | 2,613,645      | 1,077,736          | --            | --             | 1,013,171 |
| Total                 | 52,950,303     | 7,498,088          | 22,715,735    | 11,186,992     | 7,018,409 |
| All species           | 53,277,776     | 7,683,283          | 22,792,701    | 11,226,574     | 7,034,915 |
|                       |                |                    |               |                | 4,540,303 |

Table 101.--All live tree biomass volume by species group and tree biomass component, Kansas, 1981

(In thousand cubic feet)

| Species group         | Biomass component |                    |               |                |         |                |
|-----------------------|-------------------|--------------------|---------------|----------------|---------|----------------|
|                       | All components    | 1- to 5-inch trees | Growing stock |                | Cull    |                |
|                       |                   |                    | Boles         | Tops and limbs | Boles   | Tops and limbs |
| SOFTWOODS             |                   |                    |               |                |         |                |
| Eastern redcedar      | 17,701            | 10,010             | 4,160         | 2,140          | 892     | 499            |
| Total                 | 17,701            | 10,010             | 4,160         | 2,140          | 892     | 499            |
| HARDWOODS             |                   |                    |               |                |         |                |
| Bur oak               | 368,784           | 34,164             | 179,043       | 89,298         | 40,528  | 25,751         |
| Select white oak      | 109,230           | 7,157              | 43,999        | 21,433         | 23,271  | 13,370         |
| Other white oak       | 56,862            | 10,384             | 25,633        | 11,992         | 5,449   | 3,404          |
| Select red oak        | 103,985           | 4,364              | 56,954        | 28,258         | 7,408   | 7,001          |
| Other red oak         | 68,077            | 3,829              | 34,501        | 17,850         | 6,940   | 4,957          |
| Select hickory        | 44,514            | 7,249              | 22,187        | 10,323         | 2,783   | 1,972          |
| Other hickory         | 32,220            | 7,009              | 15,003        | 6,961          | 2,087   | 1,160          |
| Pecan                 | 27,992            | 2,290              | 14,413        | 7,030          | 2,677   | 1,582          |
| Hard maple            | 9,386             | 3,022              | 3,846         | 1,956          | 349     | 213            |
| Soft maple            | 46,315            | 1,615              | 24,462        | 12,060         | 4,322   | 3,856          |
| Ash                   | 174,828           | 27,287             | 77,186        | 40,845         | 17,208  | 12,302         |
| Cottonwood            | 294,105           | 1,818              | 177,508       | 86,499         | 15,405  | 12,875         |
| Basswood              | 19,326            | 3,556              | 8,028         | 3,915          | 2,275   | 1,552          |
| Elm                   | 167,526           | 65,145             | 37,546        | 18,117         | 28,636  | 18,082         |
| Black walnut          | 136,037           | 16,867             | 65,030        | 32,282         | 13,254  | 8,604          |
| Willow                | 36,529            | 2,917              | 15,540        | 7,815          | 5,658   | 4,599          |
| Boxelder              | 66,021            | 8,280              | 15,350        | 7,619          | 19,703  | 15,069         |
| Hackberry             | 250,191           | 37,361             | 115,285       | 56,136         | 25,467  | 15,942         |
| Sycamore              | 41,662            | 1,456              | 24,869        | 11,739         | 1,907   | 1,691          |
| Other hardwoods       | 174,256           | 37,481             | 45,228        | 22,111         | 41,738  | 27,698         |
| Noncommercial species | 110,226           | 44,859             | --            | --             | 43,067  | 22,300         |
| Total                 | 2,338,072         | 328,110            | 1,001,611     | 494,239        | 310,132 | 203,980        |
| All species           | 2,355,773         | 338,120            | 1,005,771     | 496,379        | 311,024 | 204,479        |

Table 102.--Sampling errors<sup>1/</sup> for estimates smaller than the State totals of volume, net growth, removals, and area of commercial forest land, Kansas, 1981

| Sampling error | Commercial forest area | Growing Stock                 |        |          | Sawtimber                                    |         |          |
|----------------|------------------------|-------------------------------|--------|----------|--|---------|----------|
|                |                        | Inventory                     | Growth | Removals | Inventory                                    | Growth  | Removals |
| Percent        | Thousand acres         | - - - Million cubic feet- - - |        |          | - - - Million board feet <sup>2/</sup> - - - |         |          |
| 1              | 7,250.4                | 8,813.5                       | 825.4  | 4,046.0  | 46,135.7                                     | 3,349.3 | 21,493.3 |
| 2              | 1,812.6                | 2,203.4                       | 206.3  | 1,011.5  | 11,533.9                                     | 837.3   | 5,373.3  |
| 3              | 805.6                  | 979.3                         | 91.7   | 449.6    | 5,126.2                                      | 372.1   | 2,388.1  |
| 4              | 453.2                  | 550.8                         | 51.6   | 252.9    | 2,883.5                                      | 209.3   | 1,343.3  |
| 5              | 290.0                  | 352.5                         | 33.0   | 161.8    | 1,845.4                                      | 134.0   | 859.7    |
| 10             | 72.5                   | 88.1                          | 8.3    | 40.5     | 461.4  | 33.5    | 214.9    |
| 15             | 32.2                   | 39.2                          | 3.7    | 18.0     | 205.0  | 14.9    | 95.5     |
| 20             | 18.1                   | 22.0                          | 2.1    | 10.1     | 115.3  | 8.4     | 53.7     |
| 25             | 11.6                   | 14.1                          | 1.3    | 6.5      | 73.8   | 5.4     | 34.4     |
| 50             | 2.9                    | 3.5                           | 0.3    | 1.6      | 18.5   | 1.3     | 8.6      |
| 100            | 0.7                    | 0.9                           | 0.1    | 0.4      | 4.6  | 0.3     | 2.1      |

<sup>1/</sup>At the 68-percent probability level.<sup>2/</sup>International 1/4-inch rule.

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The third inventory of the timber resource of Kansas shows a 1.4 percent increase in commercial forest area and a 42 percent gain in growing-stock volume between 1965 and 1981. Highlights and statistics are presented on area, volume, growth, mortality, removals, utilization and biomass.

**KEY WORDS:** Area, volume, growth, mortality, removals.

